GILL TREMLETT

WHO OFFSET PUBLICATION No. 61

INTERNATIONAL DEVELOPMENT OF HEALTH MANPOWER POLICY

Tamas Fülöp and Milton I. Roemer

World Health Organization, Geneva

09285

Community Health Cell
Library and Information Centre
367, "Srinivasa Nilaya"
Jakkasandra 1st Main,
1st Block, Koramangala,
BANGALORE - 560 034.
Phone : 553 15 18 / 552 53 72
e-mail : chc@sochara.org

International Development of Health Manpower Policy

TAMAS FÜLÖP

Director, Division of Health Manpower Development, World Health Organization, Geneva, Switzerland

MILTON I. ROEMER

Professor of Public Health, School of Public Health, University of California, Los Angeles, CA, USA

WORLD HEALTH ORGANIZATION

GENEVA

1982

WHO Offset Publication No. 61

WHO offset publications are intended to make generally available material that for various reasons cannot be included in WHO's regular publications programme and would otherwise receive only limited distribution. They are usually reproduced by photo-offset from typescript, rather than by letterpress, and do not necessarily receive such detailed editorial revision as other WHO publications.

ISBN 92 4 170061 0

© World Health Organization 1982

Publications of the World Health Organization enjoy copyright protection in accordance with the provisions of Protocol 2 of the Universal Copyright Convention. For rights of reproduction or translation of WHO publications, in part or *in toto*, application should be made to the Office of Publications, World Health Organization, Geneva, Switzerland. The World Health Organization welcomes such applications.

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the Secretariat of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by the World Health Organization in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

Authors alone are responsible for the views expressed in this publication.

PRINTED IN ENGLAND

81/5173 – Spottiswoode – 5000

COMMUNITY HEALTH CELL
LIBRARY AND INFORMATION CENTRE

HP-120
09235 N82

FOREWORD

The appearance of this volume constitutes a milestone in the approach to health policy formulation in the World Health Organization. For the first time, one of the Organization's major programmes has been analysed historically and in depth. This study gives a vast new insight into the dynamics and trends of policy formulation in WHO as a whole and in the programme for health manpower development in particular. Such insight should help in the formulation of future strategies that are both wise and effective

The WHO Constitution, adopted in 1946, declares that the Organization's objective is "the attainment by all peoples of the highest possible level of health". Why has it taken so many years to develop forthright strategies to achieve this objective? This study explores the many social forces at work in WHO and in its Member States which inhibited the maturation of such strategies. Not until the Thirtieth World Health Assembly, in 1977, was a target date set for reaching the objective declared three decades earlier - with the decision that the main social target of governments and WHO "should be the attainment by all citizens of the world by the year 2000 of a level of health that will permit them to lead a socially and economically productive life".

In 1978, at the International Conference on Primary Health Care, held at Alma-Ata, USSR, the deeper meaning of that target was explored in much greater detail and the Conference declared that: "Primary health care is the key to attaining this target as part of development in the spirit of social justice". The next year, the Executive Board of WHO initiated the formulation on even a more practical level of national, regional, and global strategies for attaining health for all by the year 2000, and the Global Strategy was adopted by the Thirty-fourth World Health Assembly in 1981. The need for such strategies and the implications for health manpower development had been becoming increasingly clear for some years before this, and the Declaration of Alma-Ata lent added force to the argument that new policy objectives had to be set.

For health services to be accessible to all people, personnel were clearly needed everywhere that people lived - total population coverage had to be the goal; this meant far more training and use of health auxiliaries than most developing countries had undertaken. To make efficient use of auxiliaries and other health personnnel, their work had to be coordinated in health teams. To expect the required types and numbers of personnel to be produced, for coverage and efficiency, required sound planning. The attitudes and competencies of health manpower had to be relevant to the real problems of the people, if their services were to be effective; this demanded teaching content and methods very different from conventional patterns. Planning health manpower in reasonable quality and numbers would result in appropriate training programmes only if there was proper integration between the entities responsible for health services and those responsible for health manpower development. All these policy objectives took shape in WHO's health manpower development programme, as part of the steadily mounting movement to ensure health for all people on earth. All of them could be achieved only with enormous effort, and often by overcoming many types of opposition.

The documentation of this 30-year process in the pages that follow can help to guide us to develop effective methods of work in the future. The many experiences of the past can provide invaluable lessons on the wisest courses of action to follow towards the great health goals that lie ahead and towards the achievement of health for all by the year 2000 through primary health care.

Halfdan Mahler
Director-General

CONTENTS

Foreword i

Abbreviations vi

Preface vii

Acknowledgements xi

Part One - International Health and Manpower Problems 1

I. International Health and the Emergence of the World Health Organization 3
Background of cross-national health problems and actions 3
Early international health organizations 4
Birth of the World Health Organization 5
References 6

II. Health Manpower Activities in the Context of WHO Structure and Functions 7
WHO structure and methods of work 7
Evolution of the WHO Health Manpower Development structures 7
The dynamics of WHO policy and programme development 9
References 12

III. Health Manpower Problems: The Evolution of their Perception in WHO 13
The evolution of problem identification 13
Period I: Circumstances and perception of problems (1948-1951) 14
Period II: Circumstances and perception of problems (1952-1961) 16
Period III: Circumstances and perception of problems (1962-1972) 19
Period IV: Circumstances and perception of problems (1973-1980) 22
An approach to policy objectives 26
References 29

Part Two - The Evolution of WHO Manpower Policy Objectives 31

IV. Quantity Objective: Greater Supplies of Conventional Health Personnel 33
Increasing conventional health personnel - Period I 33
Increasing conventional health personnel - Period II 34
Increasing conventional health personnel - Period III 36
Increasing conventional health personnel - Period IV 38
References 41

V. Quality Objective: Improve Personnel Standards and Achieve Academic Excellence 43
Improved quality of personnel - Period I 43
Improved quality of personnel - Period II 43
Improved quality of personnel - Period III 45
Improved quality of personnel - Period IV 46
References 48

VI. Equality Objective: Migratory Freedom for Health Personnel 51
International standards - Period I 51
International standards - Period II 51
International standards - Period III 52
International standards versus "detrimental" migration - Period IV 53
References 56

VII. Coverage Objective: Health Personnel to Serve all the People 59
Achieving population coverage - Period I 59
Achieving population coverage - Period II 60
Achieving population coverage - Period III 62
Achieving population coverage - Period IV 63
References 68

VIII. Efficiency Objective: Avoid Waste in Training and Performance 73
Background reasons 73
Use of health auxiliaries 74
Personnel coordination through health teams 75
Management of health personnel and health programmes 77
Training teachers to enhance student learning 79
References 81

IX. Planning Objective: Preparing for Future Requirements 85
Background factors 85
Health planning - Periods I and II 86
National health planning - Period III 87
Health manpower planning - Period IV 88
References 91

X. Relevance Objective: Training Appropriate to Local Health Needs 93
Meaning and background of educational relevance 93
Strengthening education in preventive and social medicine 94
Medical education on other salient problems 95
Teacher-training for relevant learning 96
Community-oriented education of health personnel 98
References 101

XI. Integration Objective: Health Service Needs and Manpower Development 105
Historical background of health services and personnel education 105
Rise of the integration concept in WHO 106
Coordinated health service and health manpower development activities in countries 108
Towards integration of health services and manpower development - Period IV 110
References 114

Part Three: Other perspectives 117

XII. Experiences in Selected Countries 119
Selection of countries 119
Ethiopia 120
Indonesia 122
Malaysia 125
Gabon 127
Costa Rica 129
Barbados 132
Comment 134

XIII. World Trends in Health Manpower 135
World movement for health advancement 135
Trends in the quantity and types of personnel 135
Trends in personnel performance 137
National health manpower policy issues 142
Trends in the health status of populations 145
Impacts of the World Health Organization 146
References 152

Part Four: Summary and Conclusions 155

XIV. Summary of the Past and Looking Ahead 157
Past developments in HMD policy 157
HMD experience in selected countries 161
World trends in health manpower 162
The future - a view based on this analysis 164
References and notes 168

Abbreviations

AFRO	WHO Regional Office for Africa
AMRO	WHO Regional Office for the Americas
CARICOM	Caribbean Community
CCSS	La Caja Costarricense del Seguro Social (Costa Rican Social Security Fund)
CENDES	Centro de Investigaciones de Desarrollo de la Universidad de Venezuela (Research Development Centre of the University of Venezuela)
CIOMS	Council for International Organizations of Medical Sciences
CUSS	Centre Universitaire des Sciences de Santé
EB	WHO Executive Board
EMRO	WHO Regional Office for the Eastern Mediterranean
ENSAS	Ecole nationale de Santé et d'Action sociale (Gabon) (State School for Health and Social Action)
ET	Education and Training
EURO	WHO Regional Office for Europe
GNP	Gross national product
GP	General practice
GPW	WHO General Programme of Work
HMD	Health manpower development
HSMD	Health services and manpower development
ILO	International Labour Organisation
JCHP	UNICEF/WHO Joint Committee on Health Policy
NHS	National health service
OIHP	Office international d'Hygiène publique
PAHO	Pan American Health Organization
PASB	Pan American Sanitary Bureau
PDIU	Project Design and Implementation Unit (Barbados)
PHC	Primary health care
P/L/E index	Level of development based on GNP per capita, rate of literacy, and average life expectancy for males
PSM	Preventive and social medicine
SEARO	WHO Regional Office for South-East Asia
TBA	Traditional Birth Attendant
TCDC	Technical cooperation among developing countries
USA	United States of America
UCHS	University Centre for Health Sciences
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific, and Cultural Organization
UNRRA	United Nations Relief and Rehabilitation Administration
USSR	Union of Soviet Socialist Republics
UWI	University of the West Indies
WHA	World Health Assembly
WHO	World Health Organization
WPRO	WHO Regional Office for the Western Pacific

PREFACE

"To look forward with vision, it is wise to glance backward with perception - not to be bound by history, nor to blame ourselves or our predecessors, but to learn lessons as a springboard to the future."

Halfdan Mahler
Director-General
World Health Organization, 1978

As the principal international health agency, representing almost all countries, the World Health Organization inevitably mirrors the changing national conceptions and practices in the evolution of its policies. An understanding of this evolution as it affects health manpower policy over the years since WHO's inception, should help to offer guidance on the formulation of policy in the years ahead, both in countries and in the World Health Organization.

Objectives

The objectives of the study reported here, which were formulated in late 1978, were as follows:

(1) to identify the main policies, objectives and thrusts in the health manpower development (HMD) programme of WHO during its first 32 years of existence, 1948-1980;

(2) to identify the factors influencing or determining these policies, and to see how they have shaped the HMD programme through changing emphases and various modes of implementation;

(3) to judge how far policy changes and achievements in health manpower development in the WHO Member States (156 in 1980) over the past three decades could be correlated, if at all, with HMD policies and programmes in WHO; and

(4) to draw conclusions for the sound formulation of policies and programmes in WHO for the near and long-term future.

To fulfil these objectives required the collection of many types of information from divers sources. Several methods of gathering data were necessary, varying with the questions posed. Interpretation and judgement were also necessary in the exploration of relationships (a) between political and social circumstances and HMD policies in countries, and (b) between national HMD programmes and international HMD policies in WHO. Such interpretations can seldom yield firm conclusions on cause and effect, but usually lead to general inferences and approximations.

Methodology

Information on the development of HMD policies and programmes in WHO and its Member States was gathered along several lines; reviews and ciritical analyses were made of the following five types of WHO materials:

(1) Records of the governing bodies of WHO. There are several series of documents recording detailed discussions of the WHO governing bodies, resolutions adopted, etc. These include principally:

(a) Official Records of the World Health Assembly
(b) Official Records of the Executive Board
(c) Resolutions and decisions of the World Health Assembly and Executive Board.

(2) Major reports or documents submitted by the Director-General. These constitute a series of publications, ordinarily prepared by the WHO Secretariat for submission to, and review by, the Executive Board and Health Assembly. They include principally:

(a) Annual (later biennial) proposed programme budgets
(b) Annual (later biennial) reports of the Director-General
(c) The General Programme of Work covering a Specific Period (typically for 5-6 years).
(d) Periodic reports on the world health situation.

(3) Regional office records and reports. Each of the six WHO regional offices also issues publications consisting mainly of:

(a) Annual or biennial reports of the Regional Directors
(b) Proposed programme budgets
(c) Regional Committee Official Minutes of summary records of the Regional Committee meetings
(c) Technical papers and related documents.

(4) Technical books and reports. These include the WHO Technical Report Series, which make available the findings of the international groups of experts convened by WHO; the Public Health Papers series, which contains studies drawing attention to modern trends and changing concepts in public health; the Monograph Series, containing technical guides and treatises at an advanced level; quarterly and annual publications on world health statistics; and a large number of nonserial publications on a wide variety of health topics.

(5) WHO periodicals. Among these are the Bulletin of the World Health Organization, the principal scientific periodical; the International Digest of Health Legislation, with reviews of current problems on this topic and extracts or abstracts of national and national health laws; and the WHO Chronicle, containing articles on activities undertaken under the auspices, or with the participation, of WHO.

These five types of WHO publications were studied from their inception to the present; discussions, decisions, reports, articles, statistical data, and other information in this literature, relative to any aspect of health manpower development, were identified and retrieved or abstracted.

Further information has also been gathered in several other ways outside the sphere of WHO. These sources and research methods included:

(6) Questionnaire survey of expert opinion. A detailed questionnaire was sent to approximately 500 selected persons throughout the world, eliciting their opinions on HMD activities in countries and in relation to WHO.

(7) Country field studies. Visits were made to six selected countries, where detailed information on HMD policies as well as on their relationships to WHO was gathered. This was done primarily through personal interviews (both structural and open-ended) with national health authorities and the collection of relevant documents.

(8) Selected country literature search. A world literature search was done on publications reporting any aspect of health manpower development in the six countries in which field studies were made.

(9) General HMD literature search. Another general literature search was conducted with respect to any publications in the world that concerned the HMD field and included some reference to WHO. Concise summaries were prepared of the relevant aspects of these publications.

(10) Health status and health manpower statistical analysis. On the basis of data on 131 countries available in WHO or from other sources, multiple correlations were calculated and analysed on the relationships between statistical indicators of health status, general socioeconomic conditions, and health manpower resources.

(11) Miscellaneous sources. Various other means of obtaining information on selected issues were also adopted. These included:

- information searches in the WHO Library;
- computerized literature searches through the MEDLARS system on selected topics (e.g., the trends in the teaching of preventive and social medicine);
- consultations with staff members of the WHO Division of Health Manpower Development.

An historical analysis of this type can be presented along any of several dimensions, the most important of which are (a) the period of time, and (b) the concept undergoing development. It was decided that the insight that could best serve future HMD policy formulation could be derived, as explained below, from analysis principally according to concepts - in this field definable as "policy objectives". Within the evolutionary course related to each HMD objective, the chronology of events and tendencies could then be traced.

This was the predominant but not the only method of analysis. For certain phases of the study, it was more suitable to present a horizontal view of many different HMD concepts operative at one time and place. Other phases involved purely statistical analysis. The application of these several approaches will be clarified by considering the framework of presentation of the entire report.

Framework of presentation

This study of international development of health manpower policy is the first attempt to analyse the historical development of one specific component of the broad field of international health work that is carried out by WHO. In Part One, therefore, we start with a brief review of the background of organized international health activities and the birth of the World Health Organization. Chapter II describes the structure and methods of functioning of WHO, and the administrative evolution within it of activities related to the education of health personnel and the development of health manpower. Chapter III focuses on health manpower problems - their perception and formulation in changing circumstances over the years 1948 to 1980. While the problems identified are drawn principally from WHO's records, they relate, of course, to experiences and observations in countries, as perceived by the health leaders of those countries. Also in Part One, there is a general discussion of the dynamics of WHO policy development and how it grows out of the interaction between the Member States and the Organization.

Part Two presents the principal analysis of the development of health manpower policies and programmes over the years 1948 to 1980. Specific programmes, projects, and activities in health manpower development are very numerous and are carried out through divers methods of work: consultations, meetings, studies, publications, and so on. To facilitate the tracing of trends, however, all HMD activities were conceptualized under one of eight policy objectives; the sequence of their presentation is the approximate chronological order in which each objective tended to have or to acquire priority over the years. This was as follows:

1. Quantity - greater supplies of conventional health personnel.
2. Quality - improved personnel standards and academic excellence.
3. Equality - international standards and migratory freedom.
4. Coverage - health personnel to serve all the people.
5. Efficiency - avoid waste in training and performance.
6. Planning - prepare for future requirements.
7. Relevance - train personnel suitable to local health needs.
8. Integration - health service needs determining manpower developments.

With respect to certain objectives, several different programmes might be encompassed. Thus, under "efficiency" there are included the training of health auxiliaries, as well as the coordination of personnel in health teams and the strengthening of management. Under "relevance" there are encompassed training in preventive and social medicine, as well as promoting a community-orientation in the education of all health personnel. On the other hand, certain programmes relate to more than one objective; for instance, the training of auxiliaries is a matter of both efficiency and population coverage. Some overlap of objectives is also inevitable, such as between coverage and relevance. This conceptualization, nevertheless, permits the synthesis of a vast body of material, from multiple sources, in a relatively simple (and, we hope, interesting) form.

To trace the evolution of each major objective and the programmes linked to it, the years from 1948 to 1980 have been divided into four time-periods. These are not arbitrary, but relate to the general programmes of work through which WHO plans its overall activities. The first period, 1948-1951, was the phase of WHO infancy, before any general programme of work had been formulated; each of the next three periods coincides with the period of two programmes of work. In 1981, we are in the midst of the Sixth General Programme of Work (1978-1983).

Part Three examines the entire HMD field from other perspectives. Chapter XII presents a horizontal analysis of all HMD activities as observed in each of six selected countries. While all of them are developing countries, they represent an appreciable range along both economic and political dimensions. In these case-studies, one can see the interplay of health manpower planning, production, and management (or use) in various national settings. The relationships between each country and WHO's HMD programme are also explored.

Chapter XIII attempts to describe overall world trends in health manpower development. With respect to the activities for the attainment of the various objectives, what has actually occurred in the world? We attempt to answer this question with information available on the international supplies of health manpower, the quality of their performance, their efficiency, and their relevance to the health problems faced in countries. We also attempt to analyse trends in broad national policies on health manpower - its planning, its coverage of populations, and the integration of its production and use with the needs of each nation's health services.

Also in Chapter XIII we explore two further and quite difficult questions. One is the extent of the relation between health manpower resources in countries and the health status of national populations. To shed light on this, we offer a statistical analysis of certain measurements in 131 countries. The other question concerns the estimated impact of WHO on national health manpower developments. To answer this, we rely principally on analysis of the responses to questionnaires sent to HMD experts in countries throughout the world. The results of other studies on the same general question are also reported.

In Chapter XIV, which constitutes Part Four, we summarize the findings reported in all the previous chapters. These include the course of development of the eight policy objectives (Chapters IV-XI); the HMD experience as a whole in six selected countries (Chapter XII); and the overall trends in health manpower resources, their characteristics, and the health status of populations throughout the world (Chapter XIII). On the basis of this review of developments and trends, we propose policy directions for the future. In the light of the worldwide consensus on a goal of Health for all by year 2000, we put forward our judgement as to the specific HMD policies and programmes which should be most energetically promoted, both in countries and in WHO, to attain that ultimate and all-important goal.

ACKNOWLEDGEMENTS

A study of this scope was feasible only with the collaboration of many highly competent colleagues. We can name here only those whose work contributed directly to the preparation of this report; beyond those persons are innumerable other health workers, whose actions and ideas are responsible for HMD policy formulation in countries throughout the world and in WHO.

Among the direct contributors, we are indebted to Dr J. Vysohlid for his painstaking review of official documents of each of the six WHO regions, and the identification of regional decisions and activities concerning health manpower development during the years 1948-80. To Dr G. Vartanian we are indebted for his comprehensive review of the world literature on health manpower development in relation to the World Health Organization; his insights into the relationship of HMD trends in countries to larger world events were especially helpful.

For carrying out the careful field studies of health manpower development in six countries, we are very grateful to Dr Peter Goldschmidt and Dr G. Lobe Monekosso. (Dr Mya Tu kindly participated in the field study of Indonesia.) Their collection of abundant information was enriched also by perceptive interpretations of the forces underlying various national developments. We appreciated also the world literature review on HMD aspects of the same six countries by Dr Meredith Turshen. Dr Goldschmidt gave invaluable assistance in collaborating in the preparation of the interview schedules used in the country field studies and of the questionnaires sent by mail. To Dr Goldschmidt and to Miss Frances Mawson, we are also grateful for handling the logistics of the worldwide questionnaire survey of expert opinions and for the statistical analysis of the responses. We are indebted likewise to Dr William Reinke for his sophisticated statistical work on the interrelationships of numerous health and social indicators in countries.

For compilation of an exhaustive bibliography on reports in all WHO literature from 1948 to 1980, along with concise annotations, we are very grateful to Miss Elaine A. Paloscia Riccard. Her assistance was also invaluable in tracking down information through the WHO Library and other sources. The production of the manuscript of this study, through several drafts, was thanks to the highly efficient secretarial services of Miss Jenifer Payne, aided by Miss Nadine Ponthet. For the collection of WHO budgetary data, we are grateful also to Mrs D. Fournier.

The many health personnel - in WHO and in countries throughout the world - who contributed indirectly to the ideas in this study are too numerous to recite. We are especially grateful to the 170 health personnel throughout the world who replied to our questionnaire and to the scores of persons in the six countries who kindly participated in various interviews and discussions. We trust that these many colleagues will find our account of some small value.

PART ONE

INTERNATIONAL HEALTH AND MANPOWER PROBLEMS

Chapter I

INTERNATIONAL HEALTH AND THE EMERGENCE OF THE WORLD HEALTH ORGANIZATION

Since this study aims to analyse the development of health manpower policy in the World Health Organization (WHO) in order to acquire perspective for planning ahead, it may be helpful to consider briefly the general background of international health activities as a whole and the emergence of WHO. Then one should have a better understanding of the current structure and operations of the world's principal international health agency, and the place within it involving health manpower policies and programmes.

Background of cross-national health problems and actions

Almost as early as the nations of Europe engaged in overseas exploration and trade on a large scale, the problems of disease - its care and control - were recognized. When in the 17th and 18th centuries trading stations were established in Asia and elsewhere, it was common for small infirmaries to be set up to give treatment to colonists or members of the ship's crew struck by disease. As settlements of European families took shape, simple general hospitals were organized, such as that in Kuala Lumpur (in what is now Peninsular Malaysia) set up by the British Resident in 1883.[1] This was the first of what became a network of general hospitals operated by the British Colonial Medical Service in the Malay States until independence was achieved by modern Malaysia in 1957.

Religious missions were another source of transmission of Western scientific medicine from Europe to Asia and Africa. The story of Dr John Thomas, who left England for Calcutta with the East India Company in 1783, is illustrative.[2] After treating the sick in India for five years, Dr Thomas resigned from the Company, returned to England, and persuaded the Baptist Missionary Society to send to India missionaries who would minister to the sick; under this organization the first leprosy hospital in India was established just before 1800. The British explorer of Africa, David Livingstone, was a physician himself, and after 1840 his explorations of that large continent led to the establishment of many mission hospitals.[3] The work of Albert Schweitzer, the Alsatian medical missionary, at Lambaréné (in the then French Equatorial Africa) in the early twentieth century, is widely known.[4]

Philanthropic bodies, such as the Rockefeller Foundation, contributed also to the extension of Western concepts of disease prevention and control to many countries of Asia, Africa, and Latin America - both colonies and independent nations.[5] Some of the earliest programmes of environmental sanitation (including control of disease vectors) and immunization can be traced to this type of source. Indeed, in the field of health personnel training, the support of fellowships for the study of public health in the United States or Great Britain was among the activities of philanthropic foundations. Recent historical research has shown the subtle relationships between foundation-supported public health activities and the economic, as well as political, overseas interests of the donor nation.[6]

Still another early channel through which medical ideas were spread from Europe and North America to other continents has been incidental to private business enterprise.[7] In connection with mining, oil extraction, agricultural production (fruits, sugar, tea, etc.), rubber plantations, or various large manufacturing firms, corporations from the major industrialized nations have established general medical services for employees and often also for their families. These programmes are typically of much broader scope than traditional occupational health services, and sometimes - while very small in terms of the populations they affect - serve as isolated demonstrations of comprehensive medical care.

These initial mechanisms for cross-national health activity - colonial, religious, philanthropic, and entrepreneurial - doubtless extended certain medical and public health concepts from the industrialized countries to the economically less developed parts of the world. All of them, however, were essentially secondary to other motives - political, theological, economic, or all of these. The motivations of official international health bodies, established by the joint action of numerous national governments, were rather different. Their declared objective became the health protection of people, both in Europe

and its colonies, even though economic and political interests may have remained beneath the surface. Even within this objective, however, the scope of concerns of these health organizations, as we shall see, underwent a distinct evolution.

Early international health organizations

It was the spread of disease from Asia to Europe that led to the first formal international health activity in the mid-nineteenth century. Around 1830, cholera had been transmitted to Europe through infected persons on ships returning from India.[8] In order to establish uniform policies for the inspection and quarantine of ships arriving at European ports, the first International Sanitary Conference was held at Paris in 1851, with twelve European States represented. Several further such international conferences were held, attended by increasing numbers of countries, over the next half-century.

In 1907, the nations - mainly European - that had held eleven International Sanitary Conferences between 1851 and 1903, meeting in Rome, made an important decision: to establish a permanent worldwide international health organization. The Office international d'Hygiène publique (OIHP)was set up in Paris, in order to conduct studies of epidemic diseases, to hold periodic international sanitary conferences and implement their "conventions" (i.e., international agreements), and to serve as a centre for rapid exchange of epidemiological information.[9] The new body's first international meeting was held at Paris in 1912, attended by 41 countries - coming now not only from Europe, but also from Asia and the Americas. The objectives of the Paris Office were sharply focused on preventing the transmission of communicable diseases across national borders, particularly from the tropical colonies to the industrialized nations of Europe and North America.

Somewhat earlier, another international health organization had been founded in the Americas, but its work was confined to the western hemisphere. In 1902, the Pan American Sanitary Bureau (PASB) was created at a conference held in Mexico City.[10] Its permanent office was set up in Washington, DC, and its concern was largely focused on the infectious and "pestilential" diseases in the American republics. PASB activities were not limited, however, to halting the spread of disease across national borders; they attempted also to reduce the occurrence of communicable diseases within Latin American countries, particularly by promotion of environmental sanitation and vector-control programmes (against yellow fever and malaria).

A third international health organization took shape with the formation of the League of Nations following the First World War. The Covenant of the League, which came into force in 1920, contained a provision "to endeavour to take steps in matters of international concern for the prevention and control of disease".[11] Soon the League established under its Secretariat a Health Organisation with offices (like the entire League) in Geneva, Switzerland. The scope of work of this body was much broader than that of its two predecessors; it included not only epidemiological activities, but also technical studies of health problems, international standardization (e.g., of biologicals and pharmaceuticals), reports on divers health subjects (not necessarily communicable diseases) by committees of experts, international conferences on special problems (e.g., rural hygiene), and also direct assistance to governments (e.g., field advice to China in 1929 on the organization of a quarantine service). As part of its epidemic intelligence system, the Health Organisation of the League maintained a Far-Eastern Bureau at Singapore. Relevant to the current study, it is noteworthy that by 1933 one of the special expert committees of the League was devoted to the teaching of medicine.

Between the two World Wars, all three of these international health bodies maintained their separate autonomies, although there were numerous meetings and negotiations between the OIHP in Paris and the Health Organisation of the League, from 1920 to 1936, in an attempt to achieve coordination.[12] None of these coordinating efforts succeeded, and in November 1939 the Health Committee of the League of Nations (as it was later called) held its last session in Geneva. With the onset of the Second World War, most activities of the League collapsed, the Health Committee along with them. For a relatively brief period from 1943 to 1946, some international relief work was done by the Health Division of the United Nations Relief and Rehabilitation Administration (UNRRA). None of these international health endeavours, however, was completely free of underlying economic or political influences.

Birth of the World Health Organization

When plans were made in 1945 at San Francisco for the establishment of the United Nations, health problems were included in the proposed concerns of the new world body and specified in its Charter. A Technical Preparatory Committee on health was formed, and in June-July 1946 an International Health Conference was held in New York City. It was this Conference, held under the sponsorship of the new United Nations, that drafted the document which was soon to become the Constitution of the World Health Organization. An Interim Commission was formed, with representatives from 18 nations, to carry out the work preparatory to convening the first World Health Assembly of WHO. This took place at Geneva in June-August 1948.

Experiences with the organization of international health activities, going back to 1851, had a substantial influence on the basic principles embodied in WHO and its Constitution. One problem was the obvious difficulty caused by the existence of several different international health bodies at the same time; in 1944, the old Office international d'Hygiène publique in Paris still existed, as did UNRRA. In the western hemisphere there was the Pan American Sanitary Bureau, and a Pan Arab Regional Health Bureau had been set up in 1946 in Alexandria, Egypt. To achieve unity, all these entities and their functions were absorbed by the new World Health Organization, and Article 2(a) of the Constitution defines as the first function of WHO "to act as the directing and co-ordinating authority on international health work". The two regional health bodies became integrated essentially as Regional Offices of WHO (although retaining a degree of autonomy - inasmuch as the Regional Director would have to be initially elected by the Member States of each region before final appointment by the WHO Executive Board).

Another lesson of the two previous decades was to be learnt from the demise of the Health Committee of the League of Nations, when its parent body collapsed in the flames of the Second World War. To prevent the recurrence of such a tragedy, WHO took shape as an independent entity, under the control of its own World Health Assembly and with its own budget. Yet, as stated in its Constitution (Article 69), WHO "shall be brought into relation with the United Nations as one of the specialized agencies referred to in Article 57 of the Charter of the United Nations".

Perhaps the most important difference of WHO from its several predecessors was the very broad scope of its objective and functions. No longer limiting its concern to prevention of the spread of communicable diseases across national borders, or even to the greater range of technical functions assumed by the Health Committee of the League of Nations, the Constitution, in Article 1, defines the objective of WHO as "the attainment by all peoples of the highest possible level of health". The Second World War had demonstrated dramatically the great interdependence of all people and all nations. The evolution of social concepts over the past century or more had fully justified the assertion in the Constitution's preamble that:

> "The enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or social condition".

To make perfectly clear the broad intent of these principles, the Constitution indicates 22 specific functions, of which the last in order is: "to take all necessary action to attain the objective of the Organization". Relevant to the current study, one may note that the 15th specific function spelled out in the WHO Constitution, in Article 2(o), is "to promote improved standards of teaching and training in the health, medical and related professions". Implementation of most of the other explicit functions, moreover, as shown by subsequent experience, also requires various activities in the field of health manpower development.

References

1 Wylde, E.M.B. Short outline of growth of public health in Kuala Lumpur and Malaya. The Medical Journal of Malaya, 13 : 316-321 (1959).

2 Hume, E.H. Doctors courageous. New York, Harper, 1950, p. 139.

3 Elliott, W.A. Nyaka, The story of David Livingstone. London, London Missionary Society, 1908.

4 Seaver, G. Albert Schweitzer. New York, Harper, 1947.

5 Heiser, V. An American doctor's odyssey; adventures in forty-five countries. New York, Norton, 1936.

6 Brown, E.R. Rockefeller medicine men, Berkeley, University of California Press, 1979.

7 Lean, G. Rich world, poor world. London, Allen & Unwin, 1978, pp. 83-85.

8 Goodman, N.M. International health organizations and their work. 2nd ed. Edinburgh, Churchill Livingstone, 1971, pp. 36-83.

9 Ibid., pp. 84-106.

10 Duffy, J., ed. Ventures in world health: the memoirs of Fred Lowe Soper. Washington, DC, Pan American Health Organization, 1979. (PAHO Scientific Publication No. 355).

11 Goodman, N.M. op.cit., p.108.

12 Howard-Jones, N. International public health between the two World Wars - the organizational problems. Geneva, World Health Organization, 1978.

13 World Health Organization. Basic documents. 13th ed. Geneva, 1980, p.2.

14 Ibid., p.16.

15 Ibid., p.2.

16 Ibid., p.1.

17 Ibid., p.3.

18 Ibid., p.3.

Chapter II

HEALTH MANPOWER ACTIVITIES IN THE CONTEXT OF WHO STRUCTURE AND FUNCTIONS

From the very outset of the World Health Organization in 1948, activities for the development of health personnel have been an integral component of the overall programme of the Organization. This role has naturally changed and evolved in the course of more than three decades as events, both in WHO and in its Member States, have exerted their influence. To appreciate the meaning of these developments and to understand fully how they have brought about changing concepts in the area of health manpower, it is necessary to review briefly the general structure of WHO, its methods of work, and certain administrative or organizational changes that have occurred over the years.

WHO structure and methods of work

As specified in its Constitution, the highest policy-making body of WHO is the World Health Assembly, in which sit the official representatives of its Member States. For the execution of policy, the Assembly relies on the smaller Executive Board, composed of persons technically qualified in the field of health who are designated by countries elected by the Health Assembly. The employed staff, necessary to carry out and implement policies, is the Secrearíat, headed by the Director-General, who is appointed by the Assembly on the nomination of the Executive Board. Responsible ultimately to the Director-General are a great variety of technical and administrative personnel in the Geneva headquarters, in the six Regional Offices, and on assignment in countries throughout the world.

The administrative structure and composition of the WHO Secretariat have changed continually over the years, reflecting changing health problems in the world, evolving perceptions of priorities, and new policies formulated by the Health Assembly. The methods of work have also evolved over the years, particularly in the relative emphasis on various specific techniques employed. The principal methods that have been used for achieving WHO objectives have been described in the Sixth General Programme of Work covering a specific period (1978-1983).[1]

The broad approaches used by WHO include the provision of direct services to countries, e.g., by field projects, short- and long-term consultants, provision of health personnel or other types of assistance or cooperation for a defined period of time, emergency aid, supply services, and the establishment of regional health institutions for training, research and development. The international exchange of information, involving and issuing from the different sorts of technical expert meetings and publications; the development, adaptation, application, and transfer of methods and techniques related to health; studies and surveys, consultations with governments and health experts, collaboration in research and the application of research findings - all these methods have been widely employed by the Organization and resorted to by its programme for the development of health manpower. Another such time-honoured method was the provision of fellowships for training national health personnel. Finally, collaboration with other organizations and institutions, governmental and nongovernmental, at country as well as at regional and central levels, completes this brief overview of methods, all of which basically fall into one of two main categories: coordination of international health measures and technical collaboration with Member States as well as promotion of such collaboration among Member States.

Evolution of the WHO health manpower development structures

With this background on the general structure and methods of work of WHO, we may now examine more carefully the evolution and current structure of the administration of the Organization's functions in the development of health manpower. Over the years the "organizational chart" of WHO has undergone continual change (especially at headquarters), but almost from the start there has been a unit concerned with health manpower. The

evolution of this component of WHO reflects the changing concepts of health manpower policy in the world.

In its very first year, 1948, there was in the headquarters of WHO a Fellowships Section, functioning as part of the Division of Field Operations.[2] By 1949, the Division of Professional and Technical Education had taken shape, alongside three other divisions under the Department of Operational Services.[3] Within the Division were four sections - (a) Educational Institutions and Training Courses, (b) Fellowships, (c) Exchange of Scientific Information, and (d) Medical Supplies, Literature and Teaching Equipment. In 1950, the name of the unit was changed to the Division of Education and Training Services, containing three sections, on (a) Fellowships, (b) Exchange of Scientific Information, and (c) Assistance to Educational Institutions.[4] In 1959, the divisional title was shortened to Division of Education and Training; the Division included three sections for (a) Fellowships, (b) Education in Medicine and Allied Subjects, and (c) Public Health Education and Training.[5] The title of the Division remained unchanged until 1972, but the sections within the Division underwent changes.

In 1972, to make explicit a different conceptualization of the whole field, which had been evolving slowly, the name was changed to the Division of Health Manpower Development.[6] By that year, certain WHO divisions - including this one - were no longer subdivided into sections, although each staff member was assigned definite responsibilities. We need not review these changing allocations of function over the years, but may take note that, as of 1980, the Division of Health Manpower Development (HMD) in Geneva had responsibility for three "programme areas", which subsumed, in turn, seven "specialty areas" defined as:

- Health Manpower Systems
- Health Manpower Planning
- Health Team Development
- Nursing
- Educational Planning
- Educational Communication Systems
- Educational Evaluation.

It may be noted that fellowships were no longer considered either a programme or a specialty; the little that remained of these at headquarters came under the specialty area of Health Manpower Systems.

One must appreciate that in addition to the specialities that are or were the responsibility of the HMD Division, many health manpower development activities are carried out by other technical programmes in WHO. This has been done since the early days of the Organization, but it has become more evident in recent years. In reviewing, for instance, WHO programme development in the mental health field between 1949 and 1959, we find that the Expert Committee on Mental Health considered programmes for the training of personnel a basic requirement.[7] Similar emphasis on the importance of training was noted by the Expert Committee on Insecticides in 1964[8] and by a WHO Study Group on Clinical Pharmacology in 1970.[9] In 1972, official reports of groups in three specialized fields - health laboratory services,[10] family planning,[11] and health statistics[12] - emphasized the role of proper training in order to achieve progress in these activities. In 1974, the WHO Expert Committee on Malaria devoted a substantial part of its report to the training of professional malaria personnel.[13]

In the regional offices, technical programmes practically always include the training and development of relevant manpower. To cite just two examples, this was stressed for the nutrition programme in the Region of the Americas in 1977[14] and for the toxicology programme in the European Region in 1979.[15] More important, programmes for the development of health manpower are carried out by all six WHO Regional Offices, which have staff responsible for these programmes and for their promotion in countries.

Thus, it is evident that health manpower development has long been an integral part of technical programmes in WHO, as well as the function of a distinct programme. Training activities, in fact, permeate the entire Organization. As we shall see, the interdependent relationship between health manpower and health services has, in fact, come to be increasingly emphasized by the HMD programme.

Finally, before we examine in depth the policies and programmes of WHO in health manpower - their development and impacts - some comments are in order about the general dynamics of policy formulation in the Organization as a whole.

The dynamics of WHO policy and programme development

As noted earlier, the WHO Executive Board works closely with the Secretariat to execute policies made by the Health Assembly. The precise dynamics of this process, of course, are much more complex than the fundamental and straightforward provisions of the WHO Constitution might imply. Before examining and analyzing the development of policy and of programmes in health manpower over the last three decades, it may be helpful to probe more carefully how policies and programmes are developed in WHO as a whole.

In order to facilitate its function of carrying out WHO policies, the Executive Board - according to Article 28(g) of the Constitution - periodically shall "submit to the Health Assembly for consideration and approval a general programme of work covering a specific period". To enable the Board to do this, the Director-General submits a draft of such a General Programme of Work to the Board for its review, modification if necessary, and approval. This planning document is then submitted to the Health Assembly for study, further alteration if necessary, and then final approval, thereby establishing policy for the Organization for a stated period. The general programmes of work (GPWs) were initially formulated for periods of four years, but these periods have been extended to five and even six years.

The first GPW began in 1952, and WHO is currently in the midst of its sixth such programme (GPW 6). To identify policy and programme changes that have evolved in health manpower (or, indeed, any other field), it is helpful to be aware of the periodicity of all GPWs since the origin of WHO. These have been as follows:

Years	General Programme of Work
1948 - 1951	None
1952 - 1956	1
1957 - 1961	2
1962 - 1966	3
1967 - 1972	4
1973 - 1977	5
1978 - 1983	6

Discussions and studies for the preparation of each GPW to be submitted to the Executive Board begin in the Secretariat two or three years in advance; currently the seventh GPW is being prepared for the six-year period 1984-1989.

At the Twenty-ninth World Health Assembly in 1976, when GPW 6 (1978 - 1983) was approved, a further requirement was introduced into the policy-formulation process. In taking action on GPW 6, the Assembly in resolution WHA29.20 stated that "... the Programme provides an appropriate policy framework for the formulation of medium-term programmes".[16] Then, at the January 1977 meeting of the Executive Board, a method for planning medium-term programmes (MTP) was presented and approved. This method requires the detailed specification of actions to be taken year by year not only at the country level, but at the regional and global levels as well, to facilitate the implementation of the broad policy statements included in the GPW.

The first medium-term programme in a major WHO programme to be formulated at the global level (that is, in all six WHO Regions, as well as at headquarters) dealt with health manpower development.[17] This document outlined a detailed plan of activities for each of the six years in the 1978-1983 period for each of the six WHO Regions and headquarters (GPW6 declared two major HMD objectives as well as some approaches and activities in very broad terms.)[18] The plan embodies a "reorientation (of WHO activities) towards increased social relevance and technical cooperation with countries".[19] These activities involve

three major programme areas for which there are 11 specific targets. Moreover, each target includes precise criteria by which performance in reaching the target may be assessed. It need only be added that this first MIP (for health manpower development) was reviewed and approved by the Executive Board in January 1978[20] and adopted by the World Health Assembly, by resolution WHA31.36, in May 1978.[21]

- - - - - - -

The protocol and procedures for policy formulation in WHO just described may appear somewhat mechanical, but what lies behind them is a turbulent process of actions and interactions in health affairs in and among countries of the world and with WHO. A detailed description of this process and its ramifications would require elaborate analysis and discussion but, on the basis of numerous observations over the years, we may offer here an outline of the elements and general sequence of the process:

(1) Certain health problems exist and become evident or even prominent in a country.

(2) The existence of the problem is perceived, and becomes articulated by community and/or national leaders; exactly how and when the problem is formulated depends on the social and political environment in the country.

(3) Proposed solutions to the health problem (i.e., action programmes) are put forward, usually by more than one group or individual, and become the subject of discussion and debate until some action is decided upon.

(4) The decision may, indeed, involve taking no action, but if action is undertaken - or at least advocated - then a "health programme" of some sort is formulated. (In many low-income developing countries, some health programmes that are advocated and formulated are not implemented for various economic and political reasons. Indeed, the same is often true in affluent industrialized countries for reasons that are more likely to be political than economic.)

(5) When an idea for a health programme becomes widely accepted in a country, it usually tends to be supported by national health authorities and eventually becomes part of national health policy.

(6) At international meetings - particularly of the WHO governing bodies - there is an opportunity for national health leaders to exchange ideas about their own country's health problems, its experiences with programmes, and national policies.

(7) Factual information on health problems and programmes in numerous countries is meanwhile communicated to national health representatives by technical personnel of the WHO Secretariat - personnel in a position to make observations and assimilate information from many sources. Similar information flows in the other direction.

(8) Eventually, from this exchange, there emerges a decision on WHO policy through a resolution adopted by the World Health Assembly. Most such decisions constitute advocacy of an objective - along with proposals that certain actions should be taken in countries, as well as by the Secretariat, to solve specified health problems. The types of action proposed may vary in their nature - health promotion, disease prevention, treatment, rehabilitation, etc.. They may also vary enormously with respect to the political echelon concerned (national, provincial, local), the possible involvement of international organizations, and other considerations.

(9) On the basis of Health Assembly policy decisions on objectives and/or programmes, the Secretariat may take numerous deliberate initiatives to plan, promote or help implement appropriate programmes. The final implementation of a policy in a country, of course, depends on that country. Countries may also be stimulated to request collaboration from WHO (or, indeed, other organizations or nations as well) to undertake certain programmes. Without any external agency participation, moreover, countries may simply carry out programmes, proposed by WHO, on their own.

(10) The experiences of countries with health programmes, whether WHO-stimulated or not, generate further ideas, expressed by national health leaders at WHO meetings.

(11) Likewise the experience with one programme in solving or reducing a problem may bring to the surface another problem that calls for action. To cite a classical example, the reduction in infant deaths - brought about through many activities in health and in other sectors - has contributed to action for population control through family planning. In the HMD field, pursuit of the goal of academic quality has, as we shall see, aggravated the problem of the irrelevance of many educational programmes.

(12) Thus the wheel of health policy formulation and programme development comes full circle, and a new cycle of problem identification, policy decisions, and programme implementation starts over again.

This entire process is seldom as clear-cut and orderly as one might infer from the sequence just described. Many intervening variables, in the political and social settings of different countries and in the operations of WHO itself, affect the sequence, the timing, the relative proportions, and the entire smoothness of the above process. World events entirely outside the health sector influence the process in countries, as we shall see below.

In a nutshell, the process of policy formulation and programme development and implementation may be described as a dynamic interaction between WHO and its Member States. The stimulation and influences flow in both directions at the same time. In a sense, WHO acts as a forum for the exchange of ideas among countries, and also as a channel or conduit to countries for new ideas. An idea for a health programme that is old in one country may be new in another. Moreover, the precise shape that a programme will take in each country where it may be implemented is likely to vary with the social, economic, and political circumstances of that country.

As a result of this dynamic interaction, the formulation of policies and the implementation of programmes undergo continuous change within countries and also within WHO. Thus, a programme that is launched at one time does not necessarily disappear when another, newer programme comes along. Like animals in Darwinian evolution, the old species continue to exist as new ones evolve. To cite an example in health manpower, a programme for training more physicians does not terminate when a policy for increased training of auxiliary health workers is implemented later. In a very fundamental sense, one of the major roles of WHO, in its dynamic interaction with countries, is to promote the generation and extension of ideas that the majority of its Member States (usually the vast majority) considers to be promotive of WHO's central objective - "the attainment by all peoples of the highest possible level of health" - and is prepared to act on, with or without the collaboration of WHO.

To understand the many programmes designed to achieve this ultimate objective - whether they concern health manpower, control of specific diseases, health service organization, or other parts of the large health sector - it is important to distinguish objectives from methods of work. A brief summary of the numerous methods of work employed by WHO has been offered above. Among them, for example, are fellowships and training courses (one of the types of technical meetings). As a verbal short-cut, there has often been a tendency, however, to speak of a fellowships programme or a programme of training courses, in the same way as one might speak of a programme to reduce tuberculosis or a programme to increase the supply of nurses. The attainment of health objectives ultimately requires many practical programmes, which, in turn, may employ various methods of work. In this study, we are concerned principally with the development of WHO health manpower policies and programmes, to which numerous methods of work may contribute.

References

1 World Health Organization. Sixth General Programme of Work Covering a Specific Period (1978-1983). Geneva, 1976, pp.79-80.

2 WHO Official Records No. 16, 1949, p.45.

3 WHO Official Records No. 24, 1950, p.107.

4 WHO Official Records No. 30, 1951, p.171.

5 WHO Official Records No. 98, 1960, p.278.

6 WHO Official Records No. 205, 1973, p.327.

7 WHO Technical Report Series No. 223, 1961 (Programme development in the mental health field: tenth report of the Expert Committee on Mental Health), pp.23-35.

8 WHO Technical Report Series No.284, 1964 (Application and dispersal of pesticides: fourteenth report of the WHO Expert Committee on Insecticides).

9 WHO Technical Report Series No.446. 1970 (Clinical pharmacology: scope, organization, training: report of a WHO Study Group).

10 WHO Technical Report Series No.491, 1972 (The planning and organization of a health laboratory service: fifth report of the WHO Expert Committee on Health Laboratory Services).

11 WHO Technical Report Series No.508, 1972. (Education and training for family planning in health services: report of a WHO Study Group).

12 Education and training in health statistics. WHO Chronicle, 26(9) : 401-404 (1972).

13 WHO Technical Report Series No.549, 1974 (WHO Expert Committee on Malaria: sixteenth report).

14 Organizacion Panamericana de la Salud. Formación académica de nutricionistas-dietistas en América Latina; guía para el desarollo de planes de estudios y programas de ensenañza. Washington, DC, 1977. (Publicación Científica No. 340).

15 World Health Organization Regional Office for Europe. Manpower development in toxicology; report on a WHO Consultation. Copenhagen, 1979. (EURO Reports and Studies 9).

16 WHO Official Records, No. 243, 1978, p.16.

17 World Health Organization. Medium-term programme for health manpower development. Geneva, 1978. (Unpublished document A31/18).

18 World Health Organization. Sixth General Programme of Work Covering a Specific Period (1978-1983). op. cit., pp. 102-104.

19 World Health Organization. Medium-term programme for health manpower development. op. cit., p.1.

20 WHO Handbook of resolutions and decisions, Volume II, 4th ed., 1981, p.124.

21 Fülöp, T. Health personnel to meet the people's needs: The WHO medium-term programme in health manpower development. WHO Chronicle, 33(3): 80-93 (1979).

Chapter III

HEALTH MANPOWER PROBLEMS : THE EVOLUTION OF THEIR PERCEPTION IN WHO

Health manpower problems have, of course, existed for centuries, they persist today; and they will doubtless continue to challenge nations and stimulate new policy formulations in the future. The nature of these problems varies with time and place and with social, economic, and political circumstances. The type of action taken in response to a problem in the health sector (or any other sector), however, depends greatly on how the problem is perceived by the person or group taking the action. The same problem - e.g., high infant mortality - may be perceived and interpreted at a given time and place in one way, and at another time and place in a totally different way. If infant deaths are perceived as a consequence of poverty and deficient health service, the actions taken in response will obviously differ from those taken if such deaths are perceived as an effective strategy for population control or as a consequence of Divine Providence.

The evolution of problem identification

A proper understanding of health manpower policies and programmes in WHO and Member States requires a review not only of problems in this field throughout the world and their changing nature, but more especially of the evolution of the identification and interpretation of those problems over the years. These problem identifications or perceptions, as noted in Chapter II, have emerged from a dynamic interaction between WHO and its Member States. To understand the operation of this interaction, it is necessary to consider the many circumstances and happenings within WHO and also within countries, as they have evolved over the years from 1948 to the present.

In order to trace the numerous complex events in the world that influence health affairs, and also the developments in WHO with which these forces interact, it is helpful to consider the 30-year span of time being reviewed according to certain periods. A convenient basis for such periodization is provided by the General Programmes of Work (GPWs) of WHO, explained and listed in Chapter II. Except for the Organization's first few years, one can define developmental periods, consisting essentially of two GPWs each, which result as follows:

Period	GPWs	Years
I	None	1948-1951
II	1 and 2	1952-1961
III	3 and 4	1962-1972
IV	5 and 6	1973-1980*

*In fact, until 1983, but this study was closed in 1980.

Any division of history into time-periods is somewhat arbitrary, but since GPWs are objectively definable and attempt, at least, to demarcate new policy and programme formulations, there is a logical rationale for their use. In this chapter we will offer brief summaries of major world events in each of these four time-periods in so far as they appear to have had an influence on WHO as a whole or on the perception and interpretation of health manpower problems in particular. We will also summarize the various ways in which specific health manpower problems have been interpreted or perceived within WHO, especially in the deliberations of its governing bodies. This background should make for a better understanding of the development of numerous health manpower policies and programmes that will be summarized in subsequent chapters. These strategies may then be conceptualized according to their objectives, towards the solution of the perceived problems. The scheme of classification of these objectives will be discussed later.

One must realize, of course, that certain world events may influence the way different problems are perceived. Moreover, the identification of one problem may stimulate approaches to its solution along many lines. Thus, perception of the problem of a severe shortage of doctors in rural areas - in contrast to their urban concentration - epitomized as a problem of geographical maldistribution of personnel, may give rise to several different strategies. It can stimulate the training of health auxiliaries; legally impose mandatory periods of rural service for all new medical graduates; provide moral and financial incentives for work in rural areas; and organize health teams, to name only a few strategies.

On the other hand, the perceptions of several different problems may all converge on the formulation of one policy objective and an associated programme. Thus the perception of several different health problems - such as the high costs of medical education, the sparsity of physicians willing to work in rural areas, and the frequent distrust of unfamiliar health professionals by village people - may stimulate the organization of one programme: the training of local health auxiliaries.

What then, were the major world events of the four time-periods defined above, and how did they influence the perceptions of health problems in Member States and in WHO ? The circumstances and problem perceptions in each of the four periods may be considered in sequence.

Period I : Circumstances and perception of problems (1948-1951)

Following the devastation of Second World War, most countries of Europe were left with massive destruction of their physical and human resources, and this was true also in many countries of Asia. During the war, of course, many established schools of medicine, nursing, etc. could not function normally, and the output of new personnel was retarded. Yet the severe trauma, malnutrition, and disease caused by hostilities made the need for health services, and for personnel to provide them, greater than ever. In spite of wartime deaths, the population of the world continued to increase, although this was most marked in the less developed countries of Latin America, Asia, and Africa.[1]

The post-war period was not only a time for national reconstruction, but also a period of birth of new sovereign nations. In the brief period from 1948 to 1951 (Period I), the developing countries increased from 43% of WHO Member States (24 out of 56) to 53% (41 out of 78). The trend for all four analytical periods is shown in Table 1. This growing strength of developing countries in the World Health Assembly, where WHO policies are laid down, was to have a substantial influence, as we will see, on the evolution of policies and programmes related to health manpower development.

Table 1. WHO Member States: Trends in the distribution of developed and developing countries, by selected years, 1948-1980.

Year	Period	Total of Members	Percentage of countries	
			Developed	Developing
1948	)	56	57	43
1951	) I	78	47	53
1952	)	79	47	53
1961	) II	108	34	66
1962	)	115	34	66
1972	) III	136	29	71
1973	)	139	29	71
1980	) IV	156	26	74

The defeat of fascism by the Allied Nations, which organized the United Nations, also led to an important philosophical concept that was prominent in Period I. During the war, many of these countries had engaged in post-war planning in order to provide a clear purpose for all the wartime suffering, beyond the negative one of defeating an enemy. In the United

Kingdom, for example, the Beveridge Report, issued in 1943 at the height of the war, led eventually to the institution of the National Health Service in order to provide publicly financed comprehensive health care for every resident.[2] In Chile, legislation was passed in 1950 that led to the implementation in 1952 of its Servicio Nacional de Salud, which integrated for the first time in Latin America the three major health-care subsystems (the Ministry of Health, Social Security, and the beneficencia societies), in order to achieve much greater population coverage.[3] In India, work was starting on implementing the monumental plans advocated by the Bhore Commission in 1946, to attempt coverage of the country's huge population with a regionalized network of properly staffed health centres and hospitals.[4] In the USSR and in countries of Eastern Europe, work was actively proceeding on the reconstruction of the massively destroyed infrastructure of nationwide health care systems.[5]

Other important health-related events of the years 1948-1951 might be recited, but their philosophical significance in the early years of WHO can be simply stated: the concept of equity as a goal of health service was becoming widely accepted. (Far-sighted public health leaders had advanced such a goal for centuries, but now political consensus on it was very broad.) Even if the achievement was usually far less than the espoused goal, there was widespread agreement on the principle that health resources and services should be accessible to all people in accordance with their true needs rather than their personal wealth or position. The concept of "the highest attainable standard of health" as "one of the fundamental rights of every human being" had been explicitly written into the WHO Constitution,[6] ratified by Member States in 1948.[6]

In this social environment, health leaders obviously could not accept passively the enormous disparities in health manpower resources known to exist among countries. The most accurate data available were on the supply of physicians, which showed extreme variations among nations in 1950; these are indicated in Table 2. Thus, at the very first session of the Interim Commission, formed in 1946 to lay the foundations for WHO, the delegate of Brazil spoke of the enormous problem of inadequate supplies of physicians, nurses, public health teachers, and sanitary engineers faced by countries throughout the world.[7]

Table 2. Physician supply: Physicians per 10 000 population in selected countries, 1950

Country	Physicians per 10 000 population
Ethiopia	0.1
Nigeria	0.1
Ghana	0.3
Mozambique	0.3
Sierra Leone	0.3
Pakistan	0.5
Thailand	0.8
Iran	1.3
El Salvador	2.0
Peru	2.4
Brazil	3.7
France	7.8
Czechoslovakia	9.2
Australia	9.8
Canada	10.2
Denmark	10.4
Switzerland	13.1
USSR	13.1
United States of America	13.3

Source: WHO Division of Health Statistics, unpublished data, 1978

but numerical shortages of health manpower, while very conspicuous, were not the onl problems perceived within countries and in WHO during Period I. In discussions at the earl World Health Assemblies, references were, indeed, made to such problems as the narro technical views of so many physicians and the need for "a new type of physician" - one wh would be more sensitive to social conditions.[8] The worldwide problem of geographica maldistribution of doctors and other health personnel was identified by several healt spokesmen from both industrialized and developing countries. Problems related to quali tative "standards" in professional education were also identified at World Health Assembl and Executive Board sessions, the implication being that in some countries standards were no high enough.[9] Even the need for each doctor to be "an active member of the community an know its economic and social structure, which has so much influence on health and disease was recognized - with the obvious implication that this was rarely the case.[10]

The actions taken on all these problems will be discussed in later chapters, but with respect to the general social circumstances of Period I, the last two years of the perio (1950-1951) were a time of great political turbulence in the world. In Korea, hostilities broke out that led directly to the accentuation of a worldwide cold war.

Repercussions of this strained political environment were soon felt in WHO. In 1949-1950, the USSR and eight other socialist countries withdrew from active participation in the World Health Organization.[11] Not until 1957, in Period II, did most of these Eastern European countries resume active WHO membership.

Period II : Circumstances and perception of problems (1952-1961)

The period of worldwide political tension, with which Period II started, did not begin to change until about 1955, when the leaders of the United States of America and the Soviet Union met in Switzerland, reaching agreement at a summit conference on certain issues that soon became labelled "the spirit of Geneva". The path to this modest rapprochement was paved with the termination of hostilities in Korea in 1953. Nevertheless, national viewpoints on many issues remained divided.

The first part of Period II, therefore, had ideological impacts on the perception of problems in WHO that led to cautious and conservative policy decisions. One small reflection of this atmosphere was the relatively great stir caused by WHO issuing the report of a small consultant group on "Medical Aspects of Social Security".[12] This document endorsed social insurance as a means to finance medical care, in support of a proposed convention of the International Labour Organisation on this subject. As a result, the World Medical Association issued a direct attack against WHO for becoming involved in controversial political matters concerning "socialized medicine".[13] The effect was predictable - namely the subsequent avoidance by the WHO Secretariat of involvement in aspects of health related to the general organization in countries of overall health services (especially medical care).

The types of health problem identified and leading to policy responses in this atmosphere, therefore, were those which could be regarded as distinctly technical, rather than social or political. This meant assigning very high priority to campaigns on specific diseases in developing countries, such as malaria or tuberculosis, at the expense of support for the general organization of health services (identified in WHO budgets as "public health administration"). WHO expenditures on selected activities in 1952 and 1962, shown in Table 3, reflect the priorities formulated. Thus the spending for malaria work rose from 8.6% to 16.7% of total WHO expenditures, while that for general public health administration declined from 15.8% to 10.5% of a much larger total. Problems of communicable disease control were, indeed, important in the developing regions of the world, but there was a price to be paid for policies that overlooked the basic importance of a firm infrastructure of health service organization in all countries - a lesson that was to be learned only some years later.

At the same time, as already shown in Table 1, the years of Period II (1952-1961) were a time of national liberation, particularly in Africa. In North Africa, several former colonies (e.g., Libyan Arab Jamahiriya, Morocco, Sudan, Tunisia) became sovereign WHO Member States during this period. In 1960-1961, no fewer than 18 newly independent countries of sub-Saharan Africa became WHO Members. Developing countries grew from 53% of active WHO Member States in 1952 to 66% in 1961. While these developing countries had, of course, a wide spectrum of viewpoints, their overall impact tended to counterbalance, in a sense, the pressures for cautious conservatism noted above.

Table 3. World Health Organization expenditures in selected health fields: amounts and percentages of total expenditures attributable to malaria work and public health administration, 1952 and 1962.

Year	Malaria work	Public Health Administration	Total WHO Expenditure
1952 expenditure	$ 685 135	$ 1 254 978	$ 7 938 850
Percent of total	8.6	15.8	100.0
1962 expenditure	4 991 691	3 136 318	29 975 997
Percent of total	16.7	10.5	100.0

Source: WHO Official Records No. 47 (1953) and No. 126 (1963)

Thus, in the two comprehensive reports on the world health situation issued during Period II (covering the years 1954-1956 and 1957-1960), there was frank recognition of the underlying role of sheer poverty in the genesis of disease. As stated in the first of these reports:

> "The advance against sheer poverty has been uneven, although the world has made great strides in both industrial and agricultural production. In the less developed areas, however, progress has been hampered by the rapid increase in population, the distractions of war, and the uneven balance between industry and rural occupations".[14]

Yet the perception of problems of the health sector in these reports did not include reference to the weak infrastructure of community health services (which undoubtedly prevailed at the time in developing countries), but was expressed rather in terms of specific diseases against which mass campaigns might be launched. In summary, the second of the above-cited reports states:

> "several of the problems were common to many countries in varying degrees. Individual diseases (malaria, tuberculosis, bilharziasis, heart disease), the nutritional deficiencies, environmental conditions, shortages in equipment and personnel, administrative complexities - all these appeared repeatedly."[15]

Still other specific diseases were singled out for identification as serious problems: leprosy, trachoma, filariasis, trypanosomiasis, typhoid fevers and dysenteries, helminthiasis, venereal diseases, cancer, and mental disorders. The closest this type of problem-identification came to concern for the general structure of health service organization in countries was the somewhat vague reference to "administrative complexities".

In health manpower, the problems identified were numerous, and the importance attached to the subject steadily increased over the span of Period II. As reflected by interventions during the World Health Assembly on issues related to education and training, these increased from 22 in the Fifth (1952) to 71 in the Fourteenth World Health Assembly (1961), a rise of 223% (while Member States in this period increased by only 35%).[16] The content of the interventions, however, was almost entirely related to the basic production of health personnel (including the characteristics of the training received), and hardly to the planning of health manpower or the way that personnel functioned (i.e., their management) in health service systems. Among a total of 369 interventions on health manpower problems (cited each at least 5 times) that could be identified in all the World Health Assemblies held during Period II, the nature of those problems showed a percentage distribution of interventions as follows:[16]

Problems identified	Percentage of interventions (N = 369)
1. Problems related to fellowships	30.0
2. Need for nursing, midwifery education	16.5
3. Need for training auxiliaries	13.0
4. General shortage of health personnel	8.4
5. Need for teaching preventive and social medicine	6.2
6. Need for standards in education	4.9
7. Need for school of public health expansion	4.6
8. Need for a team approach	1.9
9. Other problems	14.5
All problems	100.0

It may be noted that only the need for a team approach is referrable to the management or functioning of health personnel in the delivery of health services, and interventions on this problem accounted for only 1.9% of the total.

Aside from fellowships, which may, of course, be relevant to many different health issues, problems 2, 3, and 4 in the above listing all relate basically to a shortage of needed health personnel, and amount to 37.9% of the interventions on specific problems identified. All three of these specified problems would suggest a policy solution aiming at expanding the quantitative output of health personnel.

Perception of this basic issue of personnel shortage in Period II is reflected in the choice of a topic for the first Technical Discussions held at a World Health Assembly in 1951, the last year of Period I. This topic was simply "The education and training of medical and public health personnel",[17] and it was followed in 1953 by one of the first organizational studies of the Executive Board, namely on "The Education and Training Programme".[18]

All the other problems identified, such as numbers 5, 6 and 7 in the above listing related to other basic objectives in the health manpower field (relevance, quality standards, and planning). These will be explored in later chapters.

Problem number 6 above - the "need for standards in education" - provoked some heated discussions at more than one World Health Assembly in this period. India and Pakistan advocated certain uniform minimal standards for medical school curricula, while other nations did not regard the diversity of methods of medical training as a problem. It is relevant that the second report of an expert committee in the health manpower field had concluded in 1952 that "the formulation of international standards of medical education was ... not feasible at the present time"; instead "careful adaptation" to local circumstances was advocated.[19] Yet the same expert committee had also stated "... that certain minimum essentials in undergraduate medical education should be universally accepted".[19] When resolution WHA9.33 was later adopted by the World Health Assembly, it simply called for further study of this controversial issue of "minimum educational standards on an international basis for doctors".[20] One of the hidden motivations at the back of this debate came to the surface in 1958, when an Executive Board discussion referred to international standards of medical education in order to "help to remove obstacles in the way of people going from one country to another to study or to practise medicine".[21]

Problems related to the training of health auxiliaries also surfaced in Period II. Although expert committees had twice advocated the value of such personnel, both in industrialized and developing countries, opposition to them took various forms; it was said, for example, that auxiliaries might degenerate into quacks. As late as 1961, at an Executive Board session, it was proposed that the training of auxiliaries be made the subject of

Technical Discussions at the next World Health Assembly; after debate, however, the topic decided upon was "Education and training of the physician for the preventive and social aspects of clinical practice".

Health manpower problems of other programmes of WHO - malaria control, environmental health, nutrition, and so on - were also frequently identified during Period II. Almost invariably the greatest obstacle to progress in these programmes was said to be a serious shortage of adequately trained health personnel. Thus, the problems identified in these other WHO programmes inevitably created pressures in the education and training field. Likewise the education and training programme exerted influence on the other health programmes. This was very prominent in respect of the nursing programme - oriented principally to training nurses at several levels, but the effects were also evident in the broad sphere of "strengthening national health service". The latter WHO programme influenced health manpower policy with regard to both reinforcing the preventive and social aspects of basic medical education and promoting improvements of schools of public health.

These varied political, social and health conditions in the world, and the perception of problems by Member States in WHO, led to policy formulations and programme activities directed towards specific objectives, to be reviewed in later chapters.

Period III : Circumstances and perception of problems (1962-1972)

The worldwide social and political situation in the decade 1962-1972 remained turbulent, exerting an inevitable influence on the identification of problems and issues in WHO. Towards the end of Period II, for example, a social revolution in Cuba brought into power in 1959 a new government. That event, in turn, stimulated the Organization of American States to form an Alliance for Progress throughout Latin America. This included much bilateral (mainly USA) financial support for health resources and services, particularly for tackling problems in rural areas.[22]

The new "cold war" conflicts were aggravated by further hostilities occurring in Viet Nam, which did not end until 1975. During these years, the international tension remained high, and it inevitably had repercussions in the United Nations and all the specialized agencies, including WHO.

Partly related to the Viet Nam conflict, but also doubtless for many other reasons that were not entirely clear, the late 1960s were marked by rebellious demonstrations of young people against the prevailing political and social systems in many countries throughout the world. National liberation movements continued in Africa and elsewhere, leading to the emancipation of more former colonies and adding new developing countries to the membership of WHO. Between 1962 and 1972, these countries continued to increase from 66% to 71% of total WHO membership (Table 1). In the years 1964-1967, the developing countries even formed a kind of internal "caucus" or voting block within the United Nations and the specialized agencies - known as the "Group of 77" even after its participants numbered more than 100.

At the same time, the 1960s were a period of advances in the social organization and planning of health resources and services in many industrialized nations. Social insurance for medical care in Sweden, for example, was extended to 100% of the population in the 1960s. The USA enacted in 1965 the first national programme of social insurance for medical care ("Medicare" for the aged) in that affluent and free-market setting; a year later in 1966, the USA also passed its first legislation explicitly referring to comprehensive health planning. With this action, attitudes towards health planning in many countries changed from suspicion to overt support. It may not be accidental that the first official WHO Technical Report dealing with national health planning was issued in 1967.[23]

Towards the end of Period III, in 1972, the People's Republic of China occupied, after 23 years, the seat of China in the World Health Assembly (following equivalent action in the United Nations). As soon became evident, important developments had been occurring in the health sector of this vast country - and particularly in health manpower policies and programmes.[24] The change on the representation of China had inevitable impacts on the identification of problems and the problem formulation of policies in WHO, and so did the further steps taken towards ensuring universality of the Organization (admission of countries for whom earlier the road to membership was barred for purely political reasons, e.g. the German Democratic Republic).

The decolonization of Africa and other regions continued dramatically during Perio III. Although national independence frequently brought campaigns for extension of communit development, greater literacy, and improved health care in these countries, the early year of self-government were often turbulent politically. The civil war in Nigeria (1967-1970 was only one of the more dramatic among many such tumultuous events. Recognizing a widenin socio-economic gap between the developed and developing nations, the United Nations desig nated the 1960s as the United Nations Development Decade, and in 1971, towards the end o Period III, a "Second Development Decade" was declared. Moreover, the impact of health upo economic development came to be increasingly appreciated (the opposite influence - poverty causing disease - had been long understood), so that the United Nations Development Programme (UNDP) increased its financial support of health activities, training among them.

At the same time, the expenditures for health services in the highly industrialized capitalist nations were rising rapidly, at a pace much greater than the growth of the gross national product (GNP). In the United States, for example, health expenditures from all sources rose from 5.3% of the GNP in 1960 to 7.9% in 1972.[25] These financial pressures induced even the affluent countries to plan the preparation of less costly types of health manpower (e.g. "nurse practitioners" or "physician assistants") than the customary professions. Greater efficiency in health care delivery, involving the utilization of health manpower was also being widely explored.

The health status of most national populations in Period III showed some improvement according to such measurements as infant mortality rates or death rates from tuberculosis, but the burden of communicable diseases and malnutrition in the developing countries remained enormous. In the Third Report on the World Health Situation, 1961-1964, it is noteworthy that, along with specific diseases, the major national health problems listed included "administrative and organizational deficiencies (including personnel deficiencies)".[26] Greater attention was also given in this period to the problems created by rapid population growth - often almost nullifying the increase in a nation's GNP. In the Fourth Report on the World Health Situation, 1965-1968, moreover, an entire chapter[27] was devoted to the problems of health manpower. Both of these world health assessments in the 1960s stressed the extremely important interdependence of socioeconomic conditions and health. The fifth report, for 1969-1972, even devotes a chapter to "Economic Development and the Organization of Health Services".[28]

A dramatic experience in the fight against malaria marked the later years of Period III. In the 1950s, WHO had mounted a global campaign for the eradication of this highly prevalent and serious disease. After steady progress for many years, largely through a strategy of residual spraying of houses with DDT, the mosquito vector began to develop resistance to this insecticide. Rather suddenly, in the late 1960s, a major resurgence of this debilitating disease occurred in many countries. Significant lessons on general public health policy were soon to be learned from this experience (see Period IV).

Perception by countries of problems involving health manpower sharpened during Period III, beyond the level in Period II. An analysis of interventions relating to health manpower at all eleven World Health Assemblies in the period showed an increase from an average of 43.7 per year in Period II to 88.2 per year in Period III (the growth by Member States being far less than this 100% rise).[29] The greater share of this increase in the identification of health manpower problems was attributable to developing countries. The topics chosen for Technical Discussions at the World Health Assemblies in 1963 and 1970, moreover, were in the health manpower field.

Especially significant was the very great variety of health manpower problems identified in World Health Assembly discussions during Period III. Counting only interventions on problems which were cited at least 10 times, there were 828 which could be classified as being concerned with definable issues in health manpower development. The great diversity of these problems, as shown by the percentage of interventions on them, is shown in Table 4.[29] The far wider scope of these problems identified in Period III, compared with Period II (listed earlier), is impressive. Not only are there numerous problems articulated concerning the production of health personnel (both in quantity and quality), but there are various problems concerning effective personnel management (including the geographic distribution of health workers both within and across countries) and also specifically concerning health manpower planning. Especially interesting, in the light of the subsequent evolution of health manpower policy, are the 3.1% of interventions on the need for coordination between

schools training health personnel and health administrations. The modified rank order of problems identified, compared with Period II, is also significant: fellowships, for example, declined from first to fourth place, whereas the shortage of health personnel rose from fourth to first place, and the identification of wholly new problems, such as the "brain drain" (third place) and the need for health planning (22nd place). Several other problems that had been noted infrequently to be included in the list for Period II (items 7, 13, 14, 15, and 20) rose to the surface in Period III. As we shall see, the explicit definition of these problems reflects increasing concern for policies on the relevance of health personnel education to the real health needs of countries.

Table 4. Health manpower problems: Percentage distribution of interventions on the main problems identified by Member States at World Health Assemblies, 1962-1972.

Problems identified	Percentage of interventions (N=828)
1. Shortage of health personnel	12.9
2. Need for training auxiliary personnel	11.3
3. "Brain drain" between countries	8.2
4. Problems related to fellowships	7.5
5. Need for cross-national equivalence of diplomas	7.4
6. Need for nursing, midwifery education	6.0
7. Need for adaptation of curricula	5.7
8. Need for teaching preventive and social medicine	5.2
9. Training of national health personnel	3.9
10. Need for more medical schools	3.7
11. Definition of "physician"	3.1
12. Need for coordination between schools training health personnel and health administrations	3.1
13. Need for training of teachers	3.0
14. Need for proper management of health personnel	2.8
15. Shortcomings of medical education	2.8
16. Need for strengthening of schools of public health	2.4
17. Need for standards in medical education	2.4
18. Need for raising the quality of medical education	1.9
19. Lack of rural health personnel	1.8
20. Relation between socioeconomic conditions and health	1.3
21. Personnel maldistribution within countries	1.2
22. Need for health manpower planning	1.2
23. Need for regional training centres	1.2
All problems identified	100.0

A theme that permeated WHO deliberations throughout Period III was, of course, assistance to the newly independent countries. This crucial need, which was felt in health manpower as in other fields, was not always articulated explicitly as a problem, but rather was often included on the agenda of several World Health Assemblies and Executive Board sessions. Resolution WHA20.50 in 1967 speaks of "the ever greater disparity that is developing in health programmes as between the developed and newly independent countries".[30] In the same vein, the agenda topic "Training of National Health Personnel", frequently came up at meetings of WHO governing bodies in these years, and referred essentially to the question of how WHO could "help countries in training their own nationals, bearing in mind the close link between training and the planning and development of health services".[31]

The several references to health manpower problems in the WHO reports on the world health situation in Period III have been noted earlier, and these problems were also identified prominently in other contexts. In 1971, there was submitted to the Executive Board an "Assessment of UNICEF/WHO-assisted Education and Training Programmes".[32] The first problem identified in this report was the weak liaison in countries between health and educational authorities. Other problems specified were the poor adaptation to local needs of health curricula (which were based instead on western models of 50 years ago), the lack of practical community-oriented teaching (it being too hospital oriented), the "brain drain", inadequate textbooks and teaching equipment, opposition (from both physicians and politicans) to the use of health auxiliaries, and the lack of a team approach.

One must appreciate that many of these health manpower problems, identified as such, were matters of controversy. Without enumerating all the details, the general lines of contention were between those spokesmen who advocated health personnel quality above all and others who criticized bitterly the irrelevance to local needs of so much professional (especially medical) education. The "quality camp" usually advocated internationally acceptable standards for medical school curricula, cross-national equivalence of academic degrees, etc. This view was advocated for such reasons as: (a) facilitating the free movement of doctors between countries, (b) promoting exchange between countries for postgraduate training and experience, and (c) enabling developing countries to assess foreign doctors coming to them, so that they would "not become a dumping ground for inefficient doctors".[33]

In opposition to the "quality camp" was the basic argument that training should be suitable and relevant to each country's needs. This position was well summarized by a statement at the 1972 World Health Assembly that:

> "There was no need for reciprocal recognition of degrees to facilitate the migration of physicians ... There was little need for standardization, since every country trained physicians to meet its own requirements in terms of quality and even of numbers."[34]

But during the entire Period III, this basic disagreement in problem definition was not clearly resolved. In a sense, the views of the two opposing schools of thought were embodied in resolution WHA24.59, submitted by the USSR, which recommended <u>both</u> "fundamental international standards in medical education" and also recognition of "local circumstances that reflect the specific character of the state of health of the population and of the public health services in different countries and regions."[35]

Another indirectly related problem, prominently identified in Period III, was the so-called "brain drain" of doctors from the less developed to the more developed countries.[36] This was also a matter for contention between those who advocated freedom of movement of personnel and those who emphasized <u>loss</u> of expensively trained manpower from countries that already had shortages in relation to their own needs.

Finally the need to train auxiliaries was a problem generating much controversy. On the one hand, there was the view (expressed in many ways) that health auxiliaries were valuable because "scarce medical time must not be wasted on work doctors need not do".[47] On the other hand, there was the repeated claim that the quality of medical service must be maintained above all, that additional doctors were the major need, and that auxiliaries were, at best, only a temporary expedient. It was only in 1971, towards the end of Period III, that a consensus began to form in favour of the definite value of auxiliaries - with a USSR-sponsored resolution in 1972 (WHA25.42) urging "Member States to intensify their efforts to promote the training and utilization of health auxiliaries".[38]

The gradual identification and clarification of these health manpower problems towards the end of Period III paved the way to a clearer interpretation of issues in Period IV, which led in turn to rather substantial modifications of emphasis in WHO policies and programmes including those concerned with health manpower.

<u>Period IV : Circumstances and perception of problems (1973-1980)</u>

The general political environment of the world seemed more placid in Period IV (1973-1980), perhaps because of the development of "detente" in international relationships. Nevertheless, local wars and revolutions continued to occur, such as the Middle East military

onflict in 1973, the liberation from colonial status of both Angola and Mozambique in 1975, nd the revolutions that radically changed the power structures of Nicaragua and Iran in 979. The number of developing countries in WHO continued to increase, but at a slower pace han in the previous two periods - rising from 71% of the total members in 1973 to 74% in 980 (Table 1).

Economically, many countries - both industrialized and developing - had great difficulties in this period. Provoked in part by the worldwide oil crisis of 1973, many countries entered a form of recession in which unemployment was paradoxically combined with inflation. The rates of growth of GNP slowed down in almost all countries, but most seriously in the very poorest nations. Between 1971 and 1975, the GNP growth in 40 of the world's poorest countries (with 1 200 000 000 population) was only 1.1%.[39] Stimulated by these serious economic difficulties, the General Assembly of the United Nations in 1974 made a declaration calling for the Establishment of a New International Economic Order and adopted a programme of action to achieve this. This declaration called dramatically for:

> "a new international economic order based on equity, sovereign equality, interdependence, common interest and cooperation among all States, irrespective of their economic and social systems which shall correct inequalities and redress existing injustices, make it possible to eliminate the widening gap between the developed and the developing countries and ensure steadily accelerating economic and social development and peace and justice for present and future generations".[40]

From the reaction that occurred throughout the United Nations and the specialized agencies to such a declaration, one can understand the sweeping character of the historic resolution WHA30.43 adopted by WHO in 1977 and stating that the World Health Organization:

> "considering that health is a basic human right and a worldwide social goal, and that it is essential to the satisfaction of basic human needs and the quality of life ... decides that the main social target of governments and WHO in the coming decades should be the attainment by all the citizens of the world by the year 2000 of a level of health that will permit them to lead a socially and economically productive life."[41]

Accordingly, it became more and more widely recognized that health was not only a desirable social goal itself, but also "a means and, indeed, an indispensable component, if not prerequisite, of social and economic development".[42]

Finally, certain other general sociocultural features of the 1970s should be noted in considering the influences on health problem identification within WHO. Initially in certain affluent industrialized countries but soon spreading very widely, there emerged a "women's liberation movement" through which women of many countries claimed a right to greater equality in economic, social and legal affairs than had prevailed hitherto. The vast growth of industrial production and the great use of automobiles in highly developed countries caused serious atmospheric pollution in many of the world's large cities; in reaction there arose widespread demands for environmental protection, which evolved into an "ecology" movement and a rejection of urban culture as "artificial". In the health sector, this soon became expressed in a mounting distrust of excessive medical technology, compared with the benefits of simple, natural lifestyles.

The WHO review of the world health situation for 1973-1977 was compelled to conclude that:

> "In spite of some important areas of progress during the period under review, poverty remains the lot of substantial parts of the populations of the Third World, and it is of course this continuing poverty that is at the root of the world's most pressing health problems".[43]

Towards the end of Period IV, WHO was proud to announce, at its World Health Assembly in 1980, that "the world and all its peoples have won freedom from smallpox" and that this achievement "... demonstrated how nations working together in a common cause may further human progress" (WHA33.3).[44] The corresponding attempt to eradicate malaria, as noted earlier, had not been successful. As pointed out by many, the failure of a mass campaign approach to most health problems was due basically to the lack of an effective worldwide infrastructure of general public health organization in developing countries.[45] This experience taught WHO and Member States an important lesson, which soon had direct impacts on policy formulation for health manpower.

Among the many consequences of this rediscovery of the importance of a comprehensiv national health system - even if the goal was to conquer a specific disease like malaria was the organization of a special international meeting, to which senior officials of al Member States were invited, to examine the central question of how to assure needed healt services for all people in the world. After 30 years of effort, the main objective of th World Health Organization - "attainment by all peoples of the highest possible level o health" - was very far from achievement. The problems of disease, malnutrition, an premature death, especially in the developing countries, remained enormous. A large propor tion of mankind did not have access to even elementary health care. Recognition of thes grim realities had, indeed, been mounting over the years.

After extensive preparatory work, a global Conference on Primary Health Care was held i September 1978 at Alma-Ata, USSR. From this epochal meeting, there came the Declaration o Alma-Ata, which defined primary health care as:

> "essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community ...[Furthermore] primary health care relies, at local and referral levels, on health workers, including physicians, nurses, midwives, auxiliaries and community workers as applicable, as well as traditional practitioners as needed, suitably trained socially and technically to work as a health team and to respond to the expressed health needs of the community."[46]

In order to achieve this objective of extending primary health care to everyone, the Declaration continued:

> "All governments should formulate national policies, strategies and plans of action to launch and sustain primary health care as part of a comprehensive national health system in coordination with other sectors. To this end, it will be necessary to exercise political will, to mobilize the country's resources and to use available external resources nationally."

It is evident that the attainment of such sweeping objectives required a fresh, more daring orientation of the work of WHO in all fields, including health manpower development.

- - - - - - -

In these circumstances, it can be no surprise that the perception of health manpower problems in WHO and its Member States continued to sharpen during Period IV. In terms of interventions at World Health Assemblies held from 1973 to 1980, those relating to health manpower rose further from the average of 88.2 per year in Period III to 122.7 per year in Period IV - this rise of 39% again greatly exceeding the increase in the number of Member States between the two periods.[47] By contrast with the previous period, however, the greater share of these interventions in Period IV came from the more developed countries; the latter countries were evidently coming to appreciate more keenly their own problems in the health manpower field.

Analysis of the content of 715 interventions on health manpower problems (each mentioned at least 10 times), identified at World Health Assemblies during Period IV, also shows some significant differences from the spectrum found in Period III. The basic data are shown in Table 5. Especially noteworthy is the top rank attained by problems involving auxiliary health personnel, as well as the closely related subject of primary health workers. The disappearance from the list of any problem involving the whole issue of quality (elevating standards, equivalence of academic degrees, etc.) is equally significant. The need for more medical schools, occupying tenth rank in Period III, has also disappeared in Period IV. The inclusion for the first time among the main problems of issues related to traditional birth attendants and practitioners of traditional medicine is likewise significant. Newly identified problems in Table 5 are also those numbered 8, 10, 19, and 21. The steady descent in importance of problems related to fellowships is noteworthy; while still discussed, they have fallen from the top-ranking problem in Period II to 17th in rank in Period IV. Finally, the need to integrate the development of health services and health personnel, while mentioned in previous periods, rose to fifth in rank during Period IV.

Table 5 Health manpower problems: Percentage distribution of interventions on the main problems identified by Member States at World Health Assemblies, 1973-1980

Main problems identified	Percentage of interventions (N = 715)
1. Need for auxiliary health personnel	16.2
2. Need for primary health care personnel	11.2
3. General shortage of health personnel	8.3
4. The "brain drain" problem	6.9
5. Need for integration of health services and personnel	5.5
6. Need for training of teachers	4.9
7. Problems of medical education	4.6
8. Need for a team approach in personnel use	4.6
9. Need for adaptation of curricula	4.3
10. Need for community-oriented curricula	4.2
11. Need for post-graduate/continuing education	4.2
12. Problems of nursing and midwifery education	3.4
13. Problems involving traditional birth attendants	2.9
14. Maldistribution of personnel within countries	2.8
15. Need for health manpower planning	2.7
16. Need for proper management of health personnel	2.5
17. Fellowships	2.1
18. Need for reorientation of educational programmes	2.1
19. Problems of university centres for health sciences	2.1
20. Problems on practitioners of traditional medicine	1.7
21. Problems in technical cooperation among developing countries	1.5
22. Lack of teaching/learning materials	1.4
All health manpower problems	100.0

In order to respond to a resolution of the 1972 World Health Assembly (WHA25.42), which requested the Director-General to submit concrete proposals for the future activities of WHO in the training of health personnel for a number of years, a long-term programme with a broad list of key problems was prepared and endorsed, after discussion, by the sixty-first session of the Executive Board and the Twenty-ninth World Health Assembly. This inventory of problems grouped the health manpower issues throughout the world in four main classes (systems, planning, production and management), and 19 specific problems. In summary, this catalogue of problems was as follows:

With respect to health manpower systems, the problems were identified to include:

- absence or inadequacy of national health manpower policies;
- absence of a well-conceived national health manpower system, as an integral part of the overall health system;
- lack of integration or coordination of three elements of the HMD process (planning, production, and management);
- failure of training institutions to take account of health manpower plans quantitatively or qualitatively, absence of monitoring of health personnel development, and lack of feedback on such observations;
- lack of coordination between the HMD process and other relevant socioeconomic sectors (general education, social security, labour, etc.).

With respect to planning, the problems were:

- lack of proper planning of health teams;
- undue emphasis on conventional types of personnel (especially physicians and nurses), overlooking other categories.

With respect to production, there were problems involving:

- shortage of facilities to train the required numbers and types of health personnel needed in some fields, while excessive numbers existed in other fields;

- shortage of properly qualified teachers;
- lack of proper preparation of new types of health personnel, and reorientation of conventional types;
- wide disparities between academic training and objective health service needs;
- little appreciation of out-of-hospital health service needs, particularly for prevention and health promotion;
- lack of collaboration between educational and health care authorities;
- hostility to change from certain professional groups.

With respect to the management (utilization) of all types of health personnel, the problems concerned:

- poor working conditions, especially in rural areas;
- lack of job security, with uncertain career prospects;
- lack of job satisfaction;
- inadequate continuing education towards maintenance of technical competence;
- inadequate training of senior- and middle-level health programme administrators.[50]

This comprehensive inventory of health manpower problems served to bring together virtually all the issues that had been disclosed, explicitly or implicitly, in numerous other documents of the World Health Assembly and Executive Board during Period IV. In these bodies some controversy persisted (though at lesser intensity) over auxiliary health personnel and the use of traditional practitioners, but the previous debates about international curriculum standards and equivalence of academic degrees had significantly ended.

- - - - - - -

This completes a rather streamlined review of worldwide circumstances during 1948-1980 that impinged on the perception of health manpower problems in WHO and its Member States, as well as a summary of the ways that those problems were perceived and interpreted in WHO. (An exhaustive discussion of those circumstances, influencing factors, as well as of these problems, is to be found in the report of the document analysis.[46]) Doubtless many more events than those we mentioned have contributed to the interpretation of these problems by national health leaders, who - interacting with one another and with WHO - have formulated a series of policy objectives. We may now attempt to make a systematic analysis of those policy objectives, formulated to tackle these problems, and the programmes designed to carry them out.

An approach to policy objectives

As noted earlier, the manner in which problems are identified inevitably influences the formulation of policy objectives, which in turn stimulate various action programmes. In order to shed light on the evolution of these policies (goals, priorities, main directions) and associated programmes, with the advantage of hindsight (provided, of course, by any historical review), one can conceptualize some eight basic objectives that over the years have determined WHO health manpower strategies. In very rough chronological order, with respect to their evolving importance and priority, these have been as follows:

1. Increased quantity of conventional health personnel
2. Improved quality of medical and nursing education
3. Cross-national equality of health personnel training programmes
4. Geographic coverage of countries with personnel
5. Efficiency in production and use of health manpower
6. National planning of health manpower
7. Relevance of health personnel to national needs
8. Integration of health manpower and health services development.

This is, of course, somewhat of a simplification of the actual developments, but it can help us analyse a very complex process in a systematic way.

As we will see, the importance attached to these eight general objectives has tended to change over the years. Some objectives have grown more important while others have become less so. Moreover, in any one of the four time-periods through which the policy evolution is traced several different objectives have continued to exist side-by-side, determining the programmes to be implemented. An approximate representation of this complex evolutionary process is shown in Table 6.

Also, as we will see in the coming chapters, the programmes implemented under each of the eight objectives are certainly not mutually exclusive. The expanded training of health auxiliaries, for example, has contributed to the attainment of the objectives of geographical coverage, as well as those of efficiency and of relevance. The strengthened teaching of preventive and social medicine in medical schools has been supportive of the objectives of efficiency, of planning, and of relevance. Some objectives, on the other hand, seem to have generated unintended side-effects, which in turn gave rise to other programmes. Pursuit of the goal of achieving high-quality academic standards, for example, gave rise to much unsuitable and irrelevant training that was not adapted to the true needs of most countries and especially of developing countries; this irrelevance, in turn, generated certain corrective actions.

Table 6. Health manpower policy objectives: Approximate evolution in WHO from 1948 to 1980, by time-period and degree of importance*

Objectives	Period I 1948-51	Period II 1952-61	Period III 1962-72	Period IV 1973-80
Quantity of conventional personnel	x x x	x x x	x x	x
High quality of medical and nursing education	x x	x x x	x x	
Equality of credentials cross-nationally		x x	x	
Geographic coverage in countries		x x	x x x	x x x
Efficiency of health personnel		x	x x	x x x
Planning of health manpower			x x	x x x
Relevance of health personnel		x	x x	x x x
Integration of the development of manpower and services			x	x x x

* The check marks indicate approximate degrees of importance, from slightly important (x) to very important (x x x).

With this conceptual framework, we may now proceed to an analysis of WHO objectives and their associated programmes over the last 30 years. One must never lose sight, of course, as explained in Chapter II, of the fact that WHO policies emerge from a dynamic interaction between the Organization and the problems and activities in its Member States.

References

Velentei, D.I. Naselenie Mira: Vtchera, Segodnja, Zavtra. Moscow, Statistika, 1980.

United Kingdom Department of Health and Social Security. The national health service: summary of early history and main features. London, 1971. (NHS Note No.1).

Viel, B. La medicina socializada y su aplicación en Gran Bretaña, Unión Soviética y Chile. Santiago, Universidad de Chile, 1964.

India. Health Survey and Development Committee. Report. Vol. I - IV. New Delhi, 1946.

Sigerist, H.E. Medicine and health in the Soviet Union. New York, Citadel Press, 1947

World Health Organization. Basic documents. 13th ed. Geneva, 1980, p.1.

WHO Official Records, No. 3, 1947, p.21.

WHO Official Records No. 21, 1949, p.79.

WHO Official Records No. 25, 1950.

10 WHO Official Records No. 18, 1949, p.119.

11 World Health Organization. The first ten years of the World Health Organization. Geneva, 1958, pp.79-81.

12 World Health Organization. Cooperation with the International Labour Organisation in the field of health and social insurance. Geneva, 1952. (Unpublished document, EB9/66).

13 Statement of Dr. Louis H. Bauer re International Labor Organization and World Medical Association and Resolutions on Amendment to Constitution of the United States (S.J.R. 130). Journal of the American Medical Association, 149(9): 869-870 (1952).

14 WHO Official Records No. 94, 1959, p.11.

15 WHO Official Records No. 122, 1963, p.20.

16 Fülöp, T. Analytical review of the World Health Organization's health manpower development programme, 1948-1978: document analysis. Geneva, 1981. (Unpublished document WHO/EDUC/81.182).

17 WHO Official Records No. 35, 1952, pp.184-189.

18 WHO Official Records No. 46, 1953, pp.131-156.

19 WHO Technical Report Series, No. 69, 1953 (Expert Committee on Professional and Technical Education of Medical and Auxiliary Personnel: second report), p.22.

20 WHO Handbook of resolutions and decisions, Volume I, 1948-1972, 1973, p.45.

21 WHO Executive Board, Twenty-first session. Geneva, 1958, p.457. (Unpublished document EB21/Min.17 Rev.1).

22 Unión Panamericana. Alianza para el progreso: documentos oficiales emanadas de la reunión extraordinaria del Consejo Interamericana Económico y Social al Nivel Ministerial. Washington, DC, 1961.

23 WHO Technical Report Series No. 350, 1967. (National health planning in developing countries: report of a WHO Expert Committee).

24 Sidel, V.W., & Sidel, R. Serve the people: observations on medicine in the People Republic of China. New York, Josiah Macy Jr. Foundation, 1973.

25 United States of America Public Health Service. Health United States 1979. Washingtor DC, 1980, p.184. (DHEW Publication No. PHS 80-1232).

26 WHO Official Records No. 155, 1967, p.29.

27 WHO Official Records No. 192, 1971, pp.35-41.

28 WHO Official Records No. 225, 1975, pp.19-22.

29 Fülöp, T. op. cit.

30 WHO Handbook of resolutions and decisions, Volume I, op cit., p.45.

31 WHO Executive Board, Forty-seventh session. Geneva, 1971, p.194. (Unpublished documen EB47/SR/13/Rev.1).

32 WHO Official Records No. 195, 1971, pp.25-48.

33 WHO Official Records No. 177, 1969, p.436.

34 WHO Official Records No. 202, 1972, p.313.

35 WHO Handbook of resolutions and decisions, Volume I, op. cit., pp.49-50.

36 WHO Official Records No. 152, 1966, p.326.

37 WHO Official Records No. 119, 1962, p.212.

38 WHO Handbook of resolutions and decisions, Volume I. op cit., p.50.

39 World Health Organization. Sixth report on the world health situation, 1973-1977: Part I: Global analysis. Geneva, 1980, pp.23-24.

40 United Nations. Resolutions adopted by the General Assembly during its sixth special session, 9 April - 2 May 1974. New York, 1974, p.3. (General Assembly. Official Records: sixth special session. Supplement No. 1 (A/9559). [Resolution 3201 (S-VI)].

41 WHO Handbook of resolutions and decisions, Volume II, 4th ed., p.1.

42 World Health Organization. Sixth report on the world health situation, op. cit., p.vii.

43 Ibid., p.2.

44 WHO Handbook of resolutions and decisions, Volume II, op. cit., p.96.

45 Brockington, F. World Health. London, Churchill Livingstone, 1975, p.167.

46 Alma-Ata 1978. Primary health care, Geneva, World Health Organization, 1978 ("Health for All" Series, No. 1), pp.3-5.

47 Fülöp, T. op. cit.

48 Health manpower development: report of the Director-General to the Twenty-ninth World Health Assembly. Geneva, World Health Organization, 1976. (Unpublished document A29/15).

PART TWO

THE EVOLUTION OF WHO MANPOWER POLICY OBJECTIVES

Chapter IV

QUANTITY OBJECTIVE: GREATER SUPPLIES OF CONVENTIONAL HEALTH PERSONNEL

The formulation of any objective may be explicit and direct or - for various social and psychological reasons - it may be implicit (in various degrees), without clear articulation. The very first health manpower objective to be explicitly formulated in WHO, however, was to increase the worldwide supply of health personnel, and this meant the conventional categories with which nations were most familiar - mainly physicians and nurses. The keen and widespread perception of a serious problem of personnel shortage from the very birth of WHO has been noted in Chapter III.

In the early World Health Assembly discussions reference was made to the need also for "auxiliary personnel", but the term was employed to mean virtually anyone assisting the doctor, such as laboratory technicians, pharmacists, and nurses. Only some time later did "health auxiliaries" acquire the more specific current meaning of personnel who might be auxiliary to the nurse or to the pharmacist, as well as the polyvalent primary health worker with modest training, which the term most often connotes today. Moreover, only much later were specific programmes implemented for the training of health auxiliaries, as a matter of high priority.

The problem, perceived as a "shortage of doctors", gave rise to several sorts of corrective action in developing countries. When these had been colonies, the response was to send physicians to them from the "mother country". Another solution was to send students from the developing country (usually after independence) for professional training abroad. The ultimate solution was to establish medical schools in developing countries where none existed and/or to increase the output of existing schools. However, these schools were at first inevitably manned by expatriates and only at a later stage of development were they gradually replaced by nationals of the country concerned. From these several strategies, there would follow different programmes of action in countries and in WHO.

Increasing conventional health personnel - Period I

The very first World Health Assembly, in 1948, took action to promote the policy objective of increasing the supply of physicians everywhere; there was no explicit focus on developing countries. This objective would be promoted by a programme of education and training. Resolution WHA1.28 made reference to fellowships, medical literature, and emergency services as the means to this end.[1] The first annual report of the Director-General, moreover, refers to teaching material and equipment among the activities to promote education and training. It will be recalled from Chapter II that in this initial year, these activities were a responsibility of the Fellowships Section in the WHO Secretariat. By 1949, however, there was established at the Geneva headquarters a Division of Professional and Technical Education, responsible not only for fellowships but also for several other activities.

The Second World Health Assembly, in 1949, added further refinements to the strategy of expanding the supply of health personnel by encouraging in resolution WHA2.7 the "development by government of national educational institutes in the field of health" (underlining added).[2] The implication was clearly that schools should be available within each country, so that students would not have to go abroad for professional education. The need for actions beyond simple numerical increases in personnel - such as correcting the geographic maldistribution of physicians - was, indeed, identified at WHO discussions in Period I, but programmes were not formulated in response.

The achievement of even the simple quantitative objective of increasing health personnel was evidently not so easy in the first years of WHO. Thus in 1948, out of the total WHO budget, 16.6% was allocated for "Education and Training" (about US$797 000), but only 27% of these funds were actually spent.[3] By 1951, Education and Training (ET) was being allocated 26.3% of the total WHO budget, and the programme was sufficiently developed to spend

some 5% of this larger allocation. It is also noteworthy that within the ET account, ove the years 1949-1951, the lion's share went to support fellowships. Nevertheless, eve between 1949 and 1951, the share of money for fellowships declined slightly from 68 to 59% o the ET funds, and that for training courses rose from 26 to 32%.

In these first years of WHO, explicit attention was given also to the "training of nurse and other auxiliary personnel"[4] (one may note that the term "other" implies that nurse were regarded as one type of auxiliary). The narrative text connected with this referred t enabling "all countries to extend the health care of the masses of their population", but this verbalization of an objective did not really lead to practical activities until many years later. The importance attached to intranational training, however, was corroborated in the Director-General's report for 1951, which stated that "local training and training within the region" was indeed, being duly emphasized.[5]

These initial years of Period I (1948-1951) were naturally the first formative phase of WHO policy and programme development, when expansion of the world's supply of doctors and nurses was clearly the primary goal - although, as we shall see, other objectives were also pursued or, at least, hinted at. The "quantity objective" may now be considered for Period II, covered by the Organization's first two General Programmes of Work (GPWs).

Increasing conventional health personnel - Period II

The first WHO General Programme of Work (GPW1), issued in 1951 for the 5-year period 1952-1956, gave professional and technical education of medical and auxiliary personnel a very high priority - along with the strengthening of national health administrations.[6] In elaboration of GPW1, three aspects were stressed, of which one was simply extension of professional and technical education (other aspects will be noted in later chapters). Then GPW2 likewise gave the ET programme a high priority, and specified its main objective as being: "to reduce the shortage in numbers by increasing the output from medical schools ...".[7] This policy decision could hardly have been more specific in its quantitative emphasis.

The first session of the Expert Committee on Professional and Technical Education of Medical and Auxiliary Personnel specified several aims for a long-term ET programme, both quantitative and qualitative. Its second aim was defined as: "Increase in the number of medical, nursing, and other health personnel and of training institutions in countries and areas where necessary".[8] In a publication summarizing WHO's first ten years, 1948-1957, the ET programme's principal objectives were epitomized as three, of which the first two were:

"(a) to help countries to deal with their shortage of health and medical personnel;
(b) arranging for countries to obtain technical skill and knowledge that they now lack."[9]

Analyses of the trends in actual expenditures for the ET programme during Period II are difficult to make because of changes in the categorization of budget items such as fellowships or training courses, but it appears that the proportional ET allocations in the total WHO budget declined, presumably as the allocations for disease-specific purposes (such as malaria or tuberculosis) increased.

In so far as the subjects of expert committee meetings reflect policy priorities, it may be noted that in the 10 years of Period II (1952-1961), the Expert Committee on Professional and Technical Education of Medical and Auxiliary Personnel met on nine occasions; all but two of these focused on medical education. This does not mean that only the quantitative aspects of training physicians were explored, but that these aspects were at least a component of almost every technical report summarizing these sessions.[10] In addition, other ET-related expert meetings on nursing, midwifery, dental auxiliaries, psychiatry, and paediatrics invariably advocated increased numbers of personnel in each of these disciplines.[11] During Period II also, the First and Second World Conferences on Medical Education were sponsored by the World Medical Association (in 1953 and 1959), with the close collaboration of WHO.[12, 13] These conferences, of course, dealt with much more than the quantitative aspects of training physicians, among many subjects.

During Period II, country field projects related to Education and Training were numerous. Those involving medical and public health education (usually to strengthen the training in specific medical specialties) rose from 21.6 to 36.1% of the projects between 1952 and 1961, while those concerned with nursing education declined from 56.8 to 32.8% of the total.[14]

One very dramatic field project, constituting a rapid quantitative expansion of medical manpower, was launched towards the end of Period II. The Republic of the Congo (Leopoldville), now Zaire, attained independence from Belgium in 1960, and almost overnight all 761 European doctors from the former Belgian Congo departed. Not a single Congolese doctor had been trained. At the request of the United Nations Security Council, WHO launched an emergency operation to provide a minimum corps of qualified physicians immediately and, at the same time, to start training Congolese health personnel both at home and abroad.[15]

It is evident that the different methods of work summarized in Chapter II, were employed for all types of WHO programmes in Period II, and we need not review their detailed spectrum. It is of special interest, however, that the number of fellowships continued to increase - from 1174 in 1952 to 1668 in 1961; more important, their distribution among regions changed markedly. In 1952, fellowships originating in the European Region of WHO constituted 50.8% of the total, declining to 28.7% by 1961; meanwhile fellowships originating in countries of the African Region made up only 3.9% of the total in 1952 but rose to 20.0% in 1961.

An indirect reflection of the great importance attached to the output of physicians in Period II was the issue in 1953 of the first World Directory of Medical Schools.[16] Other such directories of health personnel training institutions were not issued until some years after. The number of medical schools throughout the world (excluding the People's Republic of China, on which data were lacking) increased from 534 in 1950 to 660 in 1960.[17] There were increases in all six of WHO's regions; the greatest absolute increase occurred in the Americas (from 152 schools to 196, or an increment of 44), but the African Region (going from 5 schools to 11) showed the greatest percentage increase - more than 100%. Along with this trend, it is no surprise that the global supply of physicians increased from 5.7 to 6.9 per 10 000 over the 1950-1960 decade, even though severe disparities among different regions remained very great.

Finally, a number of WHO publications reflected the emphasis on increasing the output of physicians in Period II. The WHO Chronicle, for example, published an article in 1954 stressing the severe shortage of physicians throughout the South-East Asia Region, which could only be solved by establishing more medical schools or enlarging those already present.[18] Similarly in 1955, the WHO Chronicle reported that many governments had been assisted in strengthening their own professional schools by the provision of visiting professors in medicine and other established disciplines. Thus, for medical schools 227 professor-months had been furnished during 1952-1954, plus 176 professor-months in schools of public health or tropical medicine, and 137 teacher-months in institutions for training physiotherapists and other health personnel.[19] In the Region of the Americas, the emphasis was explicitly on increasing the number of medical schools and enlarging existing schools.[20]

During Period II, WHO succeeded in posting a full or part-time officer, for education and training activities in every Regional Office. The emphasis was clearly on expanding the output of conventional medical schools; even when WHO attempted to encourage greater attention to schools for multipurpose workers, there was little enthusiasm for the idea within countries, largely because of resistance from the local medical professions. It is probably no accident that one of the major innovative schools for training multipurpose health workers - at Gondar in Ethiopia, begun in March 1954 - was in a country that lacked any medical school of its own at the time.[21] (More will be said about the Gondar project below). At the regional office level, there were indeed efforts to encourage the training of general health auxiliaries; this was discussed at meetings of regional committees in the Americas (1953 and 1961), the Eastern Mediterranean (1954 and 1956), South-East Asia (1957) and the Western Pacific (1952 and 1957).[22] But no definite national system for training auxiliaries was implemented, while enthusiastic support was given to the training of more physicians and professional nurses.

Beyond this major emphasis on the quantitative aspects of conventional health personnel training in Period II, there was indeed a parallel and closely associated interest in improving the academic quality - and even the social outlook - of conventional doctors. This objective, quite distinguishable from the quantitative one, will be discussed in the next chapter.

Increasing conventional health personnel - Period III

Period III coincides with WHO's GPW3 (for the years 1962 to 1966) and GPW4 (1967-1972). The main objective formulated in GPW3 for health manpower remained the same as before, namely "to reduce the shortage of trained staff" and to improve the "quality of education".[23] GPW4 departed from custom and did not spell out explicit objectives, although it stated that WHO will "continue to stimulate and assist governments to establish as early as feasible new institutions, or to improve existing ones at which the training of the various categories of professional and auxiliary health personnel can be carried out".[24] Further goals were, however, stated - namely, the "postgraduate training of administrators of health services" and also, quite significantly:

> "in those countries where medical staff is very scarce and which make little or no provision of their own for medical education, it will be necessary to devise training programmes for auxiliaries and their supervisors".[25]

The cautious restriction of this advocacy of auxiliary training to countries with little or no medical education is noteworthy.

As early as 1955, WHO had begun to promote a worldwide campaign with the objective of the eradication of malaria from the face of the earth.[26] It took some years, however, for the necessary funds to be raised to support the intended four phases: (a) preparatory, (b) attack, (c) consolidation, and (d) maintenance. Around 1960, successes were reported on the complete elimination of this major disease from certain countries. Then, in the late 1960s, evidence accumulated that the Anopheles mosquito was acquiring resistance to DDT, so that different types of insecticide and larvicide became necessary. The most dramatic shock occurred in Ceylon (now Sri Lanka). By 1963 only 17 malaria cases had been reported there, but a resurgence of the disease occurred in a few places and in 1968 the country was struck with a tremendous epidemic in which more than a million cases were reported.[27]

This very serious setback taught an important lesson. It soon became widely recognized that mass vertical campaigns that were not followed up by the resources of a sound infrastructure of health services could not be completely successful. This undoubtedly had an impact on the relative distribution of priorities within the health manpower programme. Thus, in preparing for the Second United Nations Development Decade, the Twentysecond World Health Assembly, in 1969, stated that among global priority objectives there should be:

> "the training of health service personnel at all levels, with emphasis on the education and training of national health cadres in the developing countries"[28].

This was indeed the first among six principal objectives listed.

While one cannot say that in Period III the objective of training greater numbers of conventional health personnel declined substantially, the high priority given to this objective was diminished by recognition of the importance of training personnel "at all levels". In 1965, early in Period III, the WHO Chronicle could still give major attention to the world shortage of medical manpower, with detailed statistical reports from all six WHO regions.[29] In 1970, the favourable outcome of the Congo experiment could be reported - namely, the successful training of 154 Congolese medical assistants in European medical schools to become fully qualified physicians.[30] Yet, the Technical Discussions at the World Health Assembly in 1970 on "Education for the Health Professions - Regional Aspects of a Universal Problem" ended with a list of 13 conclusions, not one of which referred specifically to educating more physicians or nurses. The general themes urging the training of national health personnel as a whole and also that training should be geared to the countries' needs came to dominate the discussions in the Executive Board, in place of the former preoccupation with enhancing medical education.

In the last official statement on health manpower policy in Period III - namely the 1972 Programme and Budget proposals for 1973 - seven policy objectives were listed. Among these objectives (which will be discussed in subsequent chapters) not one referred to increasing the numbers of conventional personnel.[31] Similarly, at the Twenty-fourth World Health Assembly in 1971, a comprehensive resolution (WHA24.59) on health manpower policy was adoptd; in specifying eight basic policy objectives, again no mention is made of medical schools. Indeed, the only mention of training institutions refers to them as being "an integral part of public health and educational systems ...".[32]

The reduced emphasis on training more physicians and nurses towards the end of Period III had no dampening impact, however, on the overall budget for ET activities. In fact, funds increased over the 11-year period from 5.6% of the overall WHO budget in 1962 to 10.4% in 1972.[33] Indeed, even though much training activity (e.g. fellowships) was to be found within other WHO programmes, the dollars specifically allocated for education and training in 1972 alone were double the overall dollars spent in this field during the previous ten years of Period II (1952-1961).

The extension of WHO's interest beyond education and training of conventional health personnel in Period III was one factor influencing the change in 1972 of the programme's name (as noted in Chapter II) from Education and Training to Health Manpower Development. The connotation of the new name was obviously far broader - both in the reference to "health manpower" and in the reference to "development" rather than "training". The new name clearly encompassed functions such as planning, production, and management (including use and deployment) of personnel - whereas "education and training" was a name connoting only some aspects of the production of personnel.

Partially indicative of the persistence of quantitative objectives and of the fact that they did not disappear in Period III, (although other purposes, such as strengthening education in preventive medicine or other specialities, were of course also served) were the trends that may be observed in the use of visiting professors as a WHO method of work. Thus, between 1962 and 1972, the proportion of all such WHO professorships, located in medical schools actually rose from 21.1 to 39.1%. At the same time, however, such assignments to auxiliary training projects rose also from 4.3 to 20.4% of the total. These enlargements were essentially at the expense of visiting teachers in schools of professional nursing, which declined from 72.6 to 31.2% of the total.[33] Over the 11-year span, moreover, the absolute number of WHO visiting professors or teachers rose from 95 to 314 persons per year. Also in the WHO report of the world health situation for 1969-1972, the Director-General still did not fail to make reference to the "acute shortage of trained manpower" throughout the world.[34]

The rate of increase of physicians in the world did, in fact, slow down somewhat during Period III. In the 1950-1960 decade, the increase from 5.7 to 6.9 physicians per 10 000 (reported earlier) constituted a rise of 21.1%. In the decade 1960-1970, the worldwide increase was from 6.9 to 7.9 per 10 000, representing a rise of only 14.5%.[35] Moreover, in the WHO African and Western Pacific Regions, the rate of increase of physicians was extremely small and in the South East Asia Region the physician-population ratio remained static. Indeed, in 38 countries or territories of these three regions the relative physician supply actually declined. With respect to medical schools, the world inventory increased from 660 to 962 between 1960 and 1970; the greatest absolute rise occurred in the Region of the Americas (with 95 additional schools), while the greatest percentage increase (from 11 to 30, or 173%) occurred in the African Region.[36]

Regarding the supply of graduate nurses in Period III, data are available only from selected countries, but in a few of these the expansion was quite impressive. In Ghana, the number of nurses rose from 1332 to 7345, or by 451%. The absolute increase in India was from 39 350 to 66 000. Yet, in a few countries (Jamaica, Togo, United Republic of Tanzania) there was an absolute decline over the decade, due possibly to migration or to professional inactivity exceeding new entrants into the nursing field.[37]

The uneven supplies of physicians and nurses across regions remained very high, in spite of the increased general output during Period III. For physicians the disparity between the European and the African Regions was more than 17 : 1 (i.e., 17.8 compared to 1.0 per 10 000); for nurses the disparity between the European and the South-East Asia Regions exceeded 20 : 1 (i.e., 30.9 compared to 1.5 per 10 000).[38]

In each of the six WHO regions during Period III, the production of increased numbers o physicians and nurses remained the main priority. Greater emphasis than in the past wa given to the training of health auxiliaries in discussion, but the implementation of thi policy was not so readily achieved.[39]

A somewhat ironic development in Ethiopia should be recorded with respect to Perio III. The origin of the Gondar Health College and Training Centre in that country in 195 has been noted earlier. Ten years later, however, the seeds of destruction of this innova tive scheme based on training multipurpose auxiliaries were planted. In 1964, there wa founded in Addis Ababa a Faculty of Medicine at the national Haile Selassie I Univer sity.[40] In due course most of the Gondar health officer graduates went on for furthe studies to become fully qualified physicians, and more recently the school itself has bee upgraded to become a medical school. All this has resulted in the gradual demise of remarkably creative programme for training health workers to serve the rural population of country of some 30 000 000 people (in 1978), 90% of whom are rural dwellers. The cautious ness with which so many developing countries approached the training of auxiliary health personnel - even to serve rural locations where no physicians existed - has been candidly attributed to opposition from the medical profession in those countries, during Period III and earlier.[41]

Increasing conventional health personnel - Period IV

Towards the end of Period III, it was gradually realised that simply training more of the same, more physicians and nurses, would not solve the problem of health coverage of very large populations in the foreseeable future. At the same time, accounts of China's astonishing coverage of its huge population with the elementary but important services of very modestly trained "barefoot doctors" made a powerful impression on the entire world. The rising general appreciation of auxiliary health personnel, already evident in Period III, ascended rapidly to new heights in Period IV.

There is much more to be said in later chapters about the place of auxiliary personnel training in the strategy for the achievement of various objectives, but here it may simply be noted that one concomitant of this development was some reduction of the previous importance attached to the expansion of education of physicians and nurses. There were other reasons for this ostensibly lesser emphasis on establishing new medical schools in Period IV (even though some new schools were founded). The costs of setting up and operating such schools were very high and beyond the financial capacity of many developing countries. Moreover, even where medical schools had been started or expanded, there was little evidence of progress in achieving population coverage; the physicians trained tended to concentrate in the urban centres (where, incidentally, they satisfied the demands of elite groups that had favoured the school's founding, in the first place). Thus, the perception of problems concerning medical education fell to 7th rank in World Health Assembly discussions during Period IV, while the need for auxiliary health personnel shot upward to issue number one. Policy emphases, both in WHO and Member States, changed correspondingly.

The Fifth General Programme of Work (GPW5) for the years 1973-1977, no longer specified the objectives of increasing the supplies of medical or other health personnel, or of elevating the standards of their education. Instead, it simply stated that WHO assistance to governments should "foster the quickest possible self-reliance" - in all fields.[42] The Sixth General Programme of Work (GPW6) for 1978-1983, has much greater specificity in defining two principal objectives:

> "To promote the development of appropriate health personnel, to meet the needs of entire populations ... (and)
> To promote the development and application of relevant processes for basic and continuing education".[43]

Under the first of these objectives, WHO would promote "... placing responsibility for primary contact with patients on auxiliaries able to carry out well-defined activities after a minimum of training".[43]

Reference in both GPW5 and GPW6 is made to a crucial general resolution adopted by the World Health Assembly in 1970 (WHA23.59), which drew attention to the "important functions of

the Organization laid down by its Constitution and in the decisions of previous Health Assemblies", including among other things:

> "(a) analysis and evaluation of information ... with a view to identifying general trends in the world health situation and to evolving a strategy in regard to the most promising ways of developing health services and medical science,
>
> (b) study of the methodology of the planning, organization and socio-economic analysis of different health systems and services of different countries and the preparation of realistic recommendations ...
>
> (c) preparation of international agreements, ... on the most important health problems, ...
>
> (d) formulation of recommendations on the establishment of standards, ...
>
> (e) coordination of research on the most urgent and important problems of biology, medicine, and public health ...
>
> (f) identification of the most rational and effective ways of helping Member States to develop their own health systems and, first and foremost, to train national health personnel at all levels, ...
>
> (g) aiming at securing the greatest participation possible of the countries of the world in the work of the Organization;"[44]

Thus the guiding principles of WHO policy were, in effect, transformed from specification of uniform or universal goals (such as combating the shortage of physicians and other health personnel) to formulation of goals which were supportive of the objectives of each country. The same broad principles of relativism, as distinguished from universality, were embodied in the WHO programme budget for 1980-1981, prepared in 1978.[45] Beyond these very general principles intended to guide WHO work, the only specific reference to health manpower activities in GPW5 is a programme objective on "development of health manpower development". GPW6 defines two broad objectives of health manpower. In both GPWs these health manpower subjects remain among the main priorities of the total Organization, as in the past.

In summary, one may say that in Period IV the theme of "increasing conventional health personnel", to which this chapter is devoted, had become substantially replaced by broad reference to health manpower development, with two broad principal objectives (quoted above). In the Director-General's report to the Twenty-ninth World Health Assembly in 1976 (reviewed towards the end of Chapter III with respect to its inventory of problems), the objectives of the Programme for health manpower development (HMD) and the strategies to achieve these are defined much more comprehensively and explicitly.[46] In this crucial document, the Director-General proposed that:

> "The general principle that should guide the Organization in health manpower development is: to collaborate with Member States, at their request, in satisfying the health needs of their entire population through health services composed of teams of health personnel, on the principle that all health activities should be undertaken at the most peripheral level of the health services as is practicable, by the workers most suitably trained to carry out these activities."[47]

HMD priorities, furthermore, are proposed "to contribute to the solution of the health problems of those people who have the most serious such problems" in both the developing and the developed countries. Moreover, the health needs and demands of the people should take precedence over professional interest, and also the training and utilization of auxiliary and community health workers and their supervisors should be strongly emphasized.[48]

These priorities clearly imply the principles of population coverage, and relevance, and other objectives to be discussed in subsequent chapters. The principles embodied in the Director-General's 1976 interpretation of appropriate HMD policy, endorsed by the Twenty-ninth World Health Assembly, were to become included in the historic Declaration of Alma-Ata in 1978, with the main social goal of health for all by the year 2000 to be achieved through primary health care.[49]

With respect to achievements in health manpower development in countries, a few observations may be offered on the quantitative objective reviewed in this chapter. In spite of the fact that it somewhat lost its importance, the number of medical schools in the world did continue to increase. Between 1970 and 1975, they rose from 962 to 1116 - by 16%.[50] Most significant, however, is the slowing down of the rate of growth of new medical schools. In the previous decade of 1960-1970, the rate of growth globally had been 46%. The Period IV data emcompass only a 5-year span, however, so that for comparison with the previous 10-year span one should theoretically double this rate to 32%. Even on this basis, a growth rate of 32% (which may well prove to be an overestimate) in the 1970-1980 decade is substantially lower than the 46% growth rate of medical schools during the previous decade. (The significance of this relative decline is even heightened by a statistical artifact - namely, that medical schools in the People's Republic of China were not counted in 1970, while they were counted in 1975; if adjustment were made for this fact, the growth rate in the 1970s would be even lower.)

The global supply of physicians also rose from 7.9 per 10 000 in 1970 to 8.7 in 1975. In the WHO African Region, however, the ratio (0.9 per 10 000) remained static over this 5-year span, and in the Eastern Mediterranean Region it actually declined (from 3.1 to 3.0 physicians per 10 000).[51]

It would seem reasonable to infer that these trends, particularly the slower rate of growth of medical schools, probably reflect modified HMD objectives of countries in Period IV. As noted above, medical schools were very expensive, and their graduates failed to meet general population needs anyway. Thus, the energies of developing countries - particularly in the African and the Eastern Mediterranean Regions - started to be partially transferred from the expansion of medical schools and the production of more physicians to increased training of various categories of auxiliary health worker. Thus, one finds that in WHO statistical publications during Period IV, there are more categories of health auxiliary for which figures are given than previously. Also, breakdowns are more often given on human resources in the developing compared with the more developed countries. For 1975, for example, the following contrasting data are significant:

Personnel type	Number per 10 000, in countries	
	Developed	Developing
Physicians	16.0	5.9
Nurses and midwives	30.3	9.7
Assistant nurses and midwives	15.1	2.4
Medical assistants	2.4	6.8

The greater ratio of medical assistants - representing typically health auxiliaries (often with three years of training following primary or junior secondary school) who are not assistant nurses - in the developing countries is in sharp contrast to the comparative ratios of the other more conventional types of health personnel. Moreover, the number of countries reporting to WHO that they were training medical assistants rose from 27 in 1960, to 38 in 1970, and to 57 in 1977.[51]

In summary then, with respect to the objective of expanding national supplies of conventional health personnel, one may conclude that in Period IV this objective persisted in most countries of the world, but at a lower priority. Within WHO policy, the importance of this objective declined perceptibly in Period IV.

References

1 WHO Handbook of resolutions and decisions, Volume I, 1948-1972, 1973, p.42.

2 Ibid., p.43.

3 WHO Official Records No. 23, 1950, p.156.

4 WHO Official Records No. 18, Annex 2, 1949, p.120.

5 WHO Official Records No. 38, 1952, p.23.

6 WHO Official Records No. 32, Annex 10, 1951, pp.55-63.

7 WHO Official Records No. 63, Annex 4, 1955, p.419.

8 WHO Technical Report Series No. 22, 1950 (Expert Committee on Professional and Technical Education of Medical and Auxiliary Personnel), p.27.

9 World Health Organization. The first ten years of the World Health Organization. Geneva, 1958, pp.373-374.

10 WHO Technical Report Series No. 69, 154, 155, 159, 175, 209, and 216.

11 WHO Technical Report Series No. 60, 199, 93, 163, 208, and 119.

12 World Medical Association. Proceedings of the First World Conference on Medical Education, 1953. London, Oxford University Press, 1954.

13 World Medical Association. Medicine - A lifelong study: proceedings of the Second World Conference on Medical Education, 1959. New York, 1961.

14 Derived from an analysis of the Annual Reports of the Director-General to the World Health Assembly and the United Nations for the years 1952 to 1961. [WHO Official Records, Nos. 45, 51, 59, 67, 75, 82, 90, 98, 105, 114].

15 WHO Official Records No. 114, 1962.

16 World Health Organization. World Directory of Medical Schools. 1st ed. Geneva, 1953.

17 World Health Organization. World Directory of Medical Schools. 5th ed. Geneva, 1979.

18 Medical Education in South-East Asia. WHO Chronicle, 8(10) : 298-301 (1954).

19 Assistance to Educational Institutions. WHO Chronicle, 9(5) : 135-138 (1955).

20 Troupin, J.L. "Las escuelas de medicina y los médicos; aspectos cuantitativos", Boletín de la Oficina Sanitaria Panamericana, 41(1) : 25-31 (1956).

21 WHO Official Records No. 75, 1957.

22 Vysohlid, J. Analytical review of the World Health Organization's health manpower development programme, 1948-1978: Document analysis by WHO regions. Geneva, 1980. (Unpublished).

23 WHO Official Records No. 102, 1960, p.55. [This GPW3 was later extended to 1966.]

24 WHO Official Records No. 143, 1965, p.64. [This GPW4 was later extended to 1972.]

25 Ibid., p. 67.

26 World Health Organization. The second ten years of the World Health Organization, 1958-1967. Geneva, 1968, p.159.

27 WHO Official Records No. 176, 1969, p.113.

28 WHO Handbook of resolutions and decisions, Volume I, 1948-1972, 1973, p.511.

29 World shortage of medical manpower. WHO Chronicle, 19(1) : 47-55 (1965).

30 The Congo experiment. WHO Chronicle, 24(10) : 453-456 (1970).

31 WHO Official Records No. 196, 1972, p.57.

32 WHO Handbook of resolutions and decisions, Volume I, op.cit., pp.49-50.

33 Fülöp, T. Analytical review of the World Health Organization's health manpower development programme, 1948-1978: Document analysis. Geneva, World Health Organization, 1980. (Unpublished document WHO/EDUC/81.182).

34 WHO Official Records No. 225, 1975, p.viii.

35 World Health Organization. World Health Statistics Annual, 1962, Vol.III and 1970, Vol. III. Geneva, 1966 and 1974.

36 World Health Organization. World Directory of Medical Schools. 5th ed. Geneva, 1979.

37 World Health Organization. World Health Statistics Annual 1970, Vol.III. Geneva, 1974.

38 World Health Organization. World Health Statistics Annual 1972, Vol. III, Geneva, 1976.

39 Vysohlid, J. op. cit.

41 Chang, W.P., Ethiopian experience in health manpower training - a review of the Public Health College. Tropical and Geographical Medicine, 30(1): 147-154 (1978).

42 Ščepin, O. P. The problems of public health in developing countries". Moscow, Medicina, 1976.

42 WHO Official Records No. 193, 1971, p.66.

43 WHO Official Records No. 233, 1976, pp.102-103.

44 WHO Handbook of resolutions and decisions, Volume I, op. cit., p.4.

45 WHO Official Records No. 250, 1978, p.xiii.

46 World Health Organization. Health Manpower Development. Geneva, 1976. (Unpublished document A29/15).

47 Ibid., p.20.

48 Ibid., p.21.

49 Alma-Ata 1978. Primary health care, Geneva, World Health Organization, 1978 ("Health for All" Series, No. 1).

50 World Health Organization. World Directory of Medical Schools, 5th ed. Geneva, 1979.

51 World Health Organization. World Health Statistics Annual 1980. Vol. III, Geneva, 1980.

Chapter V

QUALITY OBJECTIVE : IMPROVE PERSONNEL STANDARDS AND ACHIEVE ACADEMIC EXCELLENCE

Just as expanding the numbers of conventional health personnel was a prominent initial objective of WHO policies in the health manpower field, almost always linked with it was a call for improvement of the quality - or the academic qualifications of those personnel. One gets the impression that various spokesmen at WHO conferences were even straining to avoid giving the impression that they were concerned only with mere numbers; increased production of physicians and nurses, it was claimed, should never be accomplished at a sacrifice of quality. Technical and academic standards must be improved, it was argued, at the same time.

Improved quality of personnel - Period I

As already noted in Chapter IV, the first World Health Assembly adopted a programme of education and training in specific response to the devastation of the Second World War. In the Health Assembly discussion of the matter, reference was made to the degree of technical efficiency of the personnel trained, which doubtless showed concern for the quality of their work as well as their numbers.[1] The first WHO programme and budget also implies a qualitative objective by stressing that "a doctor is expected to be an active member of the community and know its economic and social structure, which has so much influence on health and disease"[2] - although this concept likewise implies an objective of relevance (discussed later). The same document states that the WHO programme should aim "to ascertain that high standards of training are internationally accepted and followed". A reference the next year to promoting international "exchange of scientific information" also suggests a quality objective in training programmes.[3]

The importance attached to fellowships - particularly those for foreign study by physicians from developing countries - from the first days of WHO, implied also to some extent an objective to improve the quality of professional education as well as performance. It will be recalled from Chapter II that the very first administrative unit in WHO, responsible for education and training was the Fellowships section.

Publications appearing in Period I reflect various concerns for raising the quality of educational programmes. Referring to a health personnel training programme in the Anglo-Egyptian Sudan in 1949, for example, a WHO staff member stated:

> "The training schemes were simple to start with and they have developed; either the same training has become increasingly elaborate or it has remained the initial step of successive and more advanced schemes ... The problem of obtaining better personnel for the health services has, therefore, been approached in two ways: by providing improved training facilities and by paying higher salaries to more-qualified personnel."[4]

Likewise in the Region of the Americas, much attention seemed to be given to improving the quality of the education of nurses, including the development of postgraduate courses.[5, 6]

Improved quality of personnel - Period II

Among health manpower problems identified in Period II, it will be recalled from Chapter III that a perceived need for standards in education ranked relatively high. Not surprisingly, therefore, the First General Programme of Work, launched in 1951 for the years 1952-1956, included among its three general objectives one on quality, namely:

> "each country should attempt to reach an agreed minimum level compatible with its stage of development."[7]

Of the two specific objectives of the ET programme of GPW2 in the professional and technic education of national health personnel, the second was: "to provide the highest possib technical efficiency by improving the type and raising the quality of medical education".[8]

In 1953, the Executive Board's organizational study on education and training defin four main ET objectives, of which the third was "to establish standards of training and qualifications of personnel".[9] The programme and budget volumes in Period II similar included references to the promotion of standards as a function and responsibility of the Division; for the year 1957, for example, the Division was requested to:

> "promote the advancement of educational concepts, standards and methods by collecting an transmitting information, organizing the exchange of experience by meetings, visits studies, etc., and advising on individual problems".[10]

The numerous meetings of the Expert Panel on Professional and Technical Education o Medical and Auxiliary Personnel devoted to medical school activities have been noted i Chapter IV. Virtually all the technical reports on these meetings in Period II mad reference to technical quality aspects of medical education. The eighth meeting in 1961 for example, focused on effective teaching of the basic medical sciences in the light o modern medicine.[11] The great use in these years of medical teaching missions - groups o scientists of international reputation who travelled to several medical schools in les developed countries to offer postgraduate courses - was an obvious indication of a quality improvement objective.[12] The continued high place of fellowships among ET expenditure was a further reflection, at least in part, of the goal to improve personnel quality. Indeed, between 1952 and 1961, fellowships for the study of clinical and medical science increased from 10.5 to 26.5% of the total, while those for health organization and service declined from 59 to 30% of the total.[13] The same interpretation can be drawn from th extensive use in Period II of WHO visiting professors.

The numerous publications emanating in Period II from both WHO headquarters and regiona offices stressing quality aspects of personnel training are too numerous to recite in full. From the Region of the Americas, for example, there were reports on the patterns of medica education in paediatrics and how their quality might be improved.[14, 15] The quality o dental education in Latin America was studied and proposals were made for its enhance- ment.[16] In Chile, studies were made on more discriminating methods for selecting entrants to medical school.[17] The WHO Regional Office for Europe also conducted a study of the teaching of paediatrics in 68 medical schools (finding half of them inadequate).[18] This office likewise advocated improvement in the training of sanitary engineers.[19]

The quality of nursing education received a great deal of attention both at WHO head- quarters and the regional offices. The Expert Committee on Nursing made numerous proposals to strengthen schools of professional nursing, both for basic and for advanced studies.[20] Improved psychiatric nursing was the focus of interest of another Expert Committee in 1956.[21] Several reports on postbasic and specialized education of nurses came from the Region of the Americas.[22, 23, 24] General accounts of the fellowships programme and overall ET activities emanating from WHO Headquarters tended to stress objective to develop improved standards in health services through upgrading the teaching institutions in countries.[25, 26]

Further examples might be cited: the teaching of statistics to medical students or the teaching of obstetrics to nursing students. These may be enough to show the emphasis in Period II on strengthening the qualitative content of professional education. The stress on advanced, university-level nursing education in many developing countries - seriously deficient in even minimally trained rural health personnel - may seem surprising in retros- pect.[27] The university-trained professional nurses, however, were needed to serve as teachers in schools of basic nursing as well as supervisors. One should not therefore condemn <u>all</u> concern for promoting qualitative content in health personnel training. It was the <u>overwhelming</u> attention given to this aspect of health manpower development in Period II that was undoubtedly out of balance with the true conditions and needs in countries.

How can one evaluate the results of all these quality-improvement efforts? Perhaps the most significant reflection of their impact may be judged from the repeated interventions in WHO governing bodies on the irrelevance of numerous training programmes to true national needs. References were made to the unsuitability of imported curricula brought to develo- ping countries, and also to the difficulties of adjustment of foreign students to some of the

high quality curricula in the universities of developed countries.[28] The goodwill of foreign consultants was appreciated, while it was still argued that they could not possibly bring appropriate solutions to the problems of educational requirements of developing countries. Yet these critical views apparently did not prevail, and one must conclude that in Period II the highest priority in WHO and in Member States was accorded to improving the quality of health science education, while also expanding the quantitative output of professional schools.

Improved quality of personnel - Period III

It will be recalled that in Period III (1962-1972), the problems identified at World Health Assembly discussions such as the need for standards in education, along with raising the quality of education, had fallen strikingly to much lower ranks than they had occupied in Period II. Instead their places were taken by issues on the training of auxiliary health personnel and the need for adaptation of curricula to each nation's real health situation.

The main objectives of GPW3 (prepared in 1960) nevertheless remained the same as before: to reduce the shortage of personnel and raise the quality of their education.[29] In Chapter IV we have already noted the more general objectives of GPW4, along with the more explicit emphasis on training programmes for health auxiliaries. It has also been noted that the Technical Discussions at the World Health Assembly in 1970 ended with a summary of 13 conclusions; not one of these specified any need for improved quality in professional education. Instead, the very first conclusion is on the need for adaptation of professional education to local conditions, and the general thrust of all the conclusions is on the value of auxiliaries and the importance of community orientation for all health personnel. The same priorities were advocated at the Executive Board session in January 1971, without any reference to quality objectives.

In one respect, however, the goal of better quality acquired new importance in Period III - namely, to put specific emphasis on the importance of continuing education. The WHO/ UNICEF Joint Committee on Health Policy (JCHP) at its 18th session, in 1971, suggested five priorities of which the fourth was "refresher and continuing education".[30] Such continuing education may imply various objectives, of which assuring the maintenance and/ or improvement of performance of health personnel is one. On the other hand, when linked to strategies for expanding the supply of auxiliary personnel, who have usually had only brief basic training, then the implications of continuing education are quite different. For this personnel a systematic schedule of formal instruction (perhaps for a week or two each year or each half-year) can do much to compensate for the brevity of the initial training, and can help the health worker to draw appropriate lessons from his or her field experiences.

Implementation of policy in postgraduate medical education was reflected towards the end of Period III by the establishment in Moscow of a WHO Collaborating Centre to analyse information and to carryout research on various aspects of postgraduate work. The Central Institute for Advanced Medical Studies in the USSR was organized in 1930 and became a WHO Collaborating Centre in 1969.[31] Nursing studies at the postgraduate level are usually defined as postbasic nursing education, and it is noteworthy that the extent of such training had greatly increased during Period II and the first part of Period III. After about the mid-point of Period III, however, WHO-sponsored programmes of postbasic nursing education (to prepare nursing teachers and administrators) gradually decreased, perhaps because countries no longer needed so much WHO cooperation in this field.[32]

Reflecting these mixed tendencies towards a quality-improvement objective in Period III, the World Health Assembly in 1971 adopted a comprehensive resolution (WHA24.59) on education and training, which embodied both (a) emphasis on the adaptation of training to national needs and (b) the principle that training should "take into account science and technology achievements ..."[33] Thus the retention of the quality objective, at least in WHO policy statements in the ET field, is evident until the end of Period III.

Certain new WHO methods of work developed in Period III were probably indicative - at least in part - of a quality objective in professional education. One was the creation of a revolving fund for facilitating the purchase for countries of teaching and laboratory equipment. This idea was authorized by a World Health Assembly resolution in 1966 (WHA19.7) to facilitate "medical and paramedical education and training".[34] Another innovative method

was a programme for producing and distributing textbooks, launched in the Region of the Americas, with a special focus on medical textbooks in Spanish.

Several publications in Period III seem to focus on rather specialized aspects of professional education, even though they did not necessarily originate in the EI Division. In 1962, an Expert Committee on Human Genetics stressed the importance of expanding instruction about this subject in basic medical education.[35] Similar advocacy of instruction in cancer and in psychiatry was included in the reports of other expert committees.[36, 37] The qualitative aspects of medical education were also reflected in an interregional travelling seminar conducted in the USSR in 1964; this group studied the manner in which Soviet medical students were provided with basic instruction in methods of medical research.[38] In 1970, another such travelling group studied postgraduate medical education in the USSR.[39] In 1962, an Expert Committee on Dental Health called for international coordination of dental education programmes "with a view to raising the level of professional competence of dentists throughout the world ..."[40] Still another Expert Committee, studying midwifery, stated in 1966 that "the standard for acceptance for training should not be less than that required for nurses and teachers".[41]

Thus, even though in Period III the priorities in the ET programme itself were changing toward a lessened emphasis on quality objectives, such goals still occupied a key place in the training activities of other WHO programmes. It took a few more years before the modified priorities in the health manpower field extended throughout all programmes of the Organization.

Improved quality of personnel - Period IV

By 1973, the issue of quality standards and associated aspects of professional education seem to have disappeared from the main manpower problems identifiable in World Health Assembly discussions. Numerous other problems had come to occupy the centre of the stage.

In GPW5 (for 1973-1977) and GPW6 (for 1978-1983), as noted in Chapter IV, there were no longer any specific references to the production of health personnel in terms of either quantitative or qualitative goals. Instead, the keynote of these statements of WHO policy was flexibility in relation to the needs recognized in each country, with promotion of the quickest possible self-reliance in all fields, including health manpower development.

The only documents that can be identified in Period IV that have any definite quality implications appear to be those about continuing education. Yet, in contrast to basic or undergraduate education, as noted above, continuing education tends to have connotations rather different from those of academic excellence or educational standards, which figured so prominently in the earlier years of WHO (particularly in the 1950s - Period II).

The World Health Assembly in 1974 adopted a resolution on continuing education for physicians (WHA27.31).[42] Although referring to quality, the clause used in the resolution's preamble was that continuing education is "of cardinal importance to the health authorities in assuring the quality and coverage of health services" (underlining added). Likewise, the concluding action recommended was:

> "the development of national systems of continuing education for the health professions, based on national and local health needs and demands, integrated with health care and educational systems, with full utilization of the resources of universities and schools of health personnel."[43]

This concept of continuing education is more closely linked to the preparation of health manpower to meet the needs and demands of the health services in a country than the traditional concept of such education - namely, to keep personnel up-to-date about scientific advances in various specialties.

This World Health Assembly resolution was based largely on the recommendations of an expert committee convened in 1973,[44] which stated that:

> "present efforts in this field [continuing education for physicians] are often unsystematic, poorly supported, little influenced by contemporary educational science, episodic,

focused more on transmitting new information than on improving competence, and only incidentally related to health needs and national health priorities."[45]

ccordingly, the Committee concluded that WHO should encourage and support:

"The development of national systems of continuing education for the health professions, with clearly defined central and regional administrative responsibility and authority, and the integration of such programmes with the national health care system".[46]

Thus, by Period IV, the quality objective in WHO's health manpower development programme ad changed its original content. This was clearly understood by everybody, though officially" never spelt out, to mean the pursuance of the "standards", of the "quality" of a ew most highly developed countries or rather of a very few most prestigious institutions in hose countries. The problem with this was that the relevance of those "standards", of that quality" even to the needs of the countries where they were practised was not questioned for ecades. It was taken for granted that they were the standards, the quality of medical ducation and were to be emulated in the whole world. This has gradually changed and quality" basically has come to connote the sort of relevance to and integration with health ervices in countries that will be the subject of later chapters of this study.

References

1 WHO Official Records No. 13, 1948.

2 WHO Official Records No. 18, 1949, p.119.

3 WHO Official Records No. 23, 1950, p.158.

4 Messinezy, D.A. Notes on the health personnel training programme of the Anglo-Egyptia Sudan. Bulletin of the World Health Assembly, 2(2): 297 (1949).

5 Oficina Sanitaria Panamericana. La preparación de enfermeras profesionales. Boletín de la Oficina Sanitaria Panamericana, 28(7): 716-723 (1949).

6 Manley, F. & Byron, W.E. "Instrucción individual; programa para desarrollar la aptitud de ensenañza de las enfermeras y supervisoras de salubridad". Boletín de la Oficina Sanitaria Panamericana, 29(10): 1062-1075 (1950).

7 WHO Official Records No. 32, 1951, p.59.

8 WHO Official Records No. 63, 1955, p.419.

9 WHO Official Records No. 46, 1953, p.131.

10 WHO Official Records No. 66, 1955, p.49.

11 WHO Technical Report Series No. 209, 1961 (The teaching of the basic medical sciences in the light of modern medicine; eighth report of the Expert Committee on Professional and Technical Education of Medical and Auxiliary Personnel).

12 Medical teaching missions; origin and development. WHO Chronicle, 6(1): 3-10 (1952).

13 Fülöp, T. Analytical review of the World Health Organization's health manpower development programme, 1948-1978", Geneva, World Health Organization, 1981. (Unpublished document WHO/EDUC/81.112).

14 Wegman, M.E. et al. La ensenañza de la pediatría en la América Latina. Boletín de la Oficina Sanitaria Panamericana, 44(4): 281-311 (1958).

15 Woiski, J.R. O ensino da pediatria no curso médico. Boletín de la Oficina Sanitaria Panamericana, 44(5): 382-385 (1958).

16 de Magalhaes Chaves, M. La ensenañza de la odontología en la América Latina. Boletín de la Oficina Sanitaria Panamericana, 43(1): 1-16 (1957).

17 Viel, B. & Requena, M. Análisis de lo resultados obtenidos con el exámen de ingreso en la Escuela de Medicina de la Universidad de Chile. Boletín de la Oficina Sanitaria Panamericana, 44(3): 203-211 (1958).

18 Teaching of paediatrics in Europe. WHO Chronicle, 12(10): 338-340 (1958).

19 Petrik, M. The training of sanitary engineers; schools and programmes in Europe and the United States. Geneva, 1956. (WHO Monograph Series No. 32).

20 WHO Technical Report Series No. 49, 1952 (Nursing: second report of the Expert Committee).

21 WHO Technical Report Series No. 105, 1956 (Psychiatric Nursing: first report of the Expert Committee).

22 Corona, E. et al. Cursos post-básicos de enfermería en México. Boletín de la Oficina Sanitaria Panamerica, 35(3): 271-278 (1953).

3 Flores de Fernández, R. Oportunidades de perfeccionamiento de las enfermeras en la escuela de enfermería de la Universidad de Chile. Boletín de la Oficina Sanitaria Panamerica, 47(6): 526-529 (1959).

4 Lazo, A. Importancia de integrar conceptos de rehabilitación en los programas básicos de las escuelas de enfermería. Boletín de la Oficina Sanitaria Panamerica, 45(1): 33-35 (1958).

5 The WHO fellowships programme. WHO Chronicle, 7(11): 333-338 (1953).

6 Grzegorzewski, E. La Organización Mundial de la Salud y la formación del médico. Boletin de la Oficina Sanitaria Panamerica, 41(1), 7-9 (1956).

7 Revision of a university nursing curriculum. WHO Chronicle, 14(2): 63-66 (1960).

8 Fülöp, T., op. cit.

9 WHO Official Records No. 102, 1960, p.57.

0 WHO Official Records No. 195, 1971, p.19.

1 WHO Official Records No. 205, 1973, pp.144-147.

2 Fülöp, T., op. cit.

3 WHO Handbook of resolutions and decisions, Volume I, 1948-1972, 1973, pp.49-50.

4 Ibid., pp.404-405.

5 WHO Technical Report Series, No. 238, 1962 (The teaching of genetics in the undergraduate medical curriculum and in postgraduate training: first report of the WHO Expert Committee on Human Genetics).

6 WHO Technical Report Series No. 322, 1966 (Cancer treatment: report of a WHO Expert Committee).

7 WHO Technical Report Series No. 252, 1963 (Training of psychiatrists: twelfth report of the WHO Expert Committee on Mental Health).

8 The scientific work of medical students in the USSR. WHO Chronicle, 20(1): 25-27 (1966).

9 Postgraduate education for medical personnel in the USSR: Report prepared by the participants in a study tour organized by the World Health Assembly. Geneva, World Health Organization, 1970. (Public Health Papers No. 39).

0 WHO Technical Report Series No. 244, 1962 (Dental education: report of a WHO Expert Committee on Dental Health).

1 WHO Technical Report Series No. 331, 1966 (The midwife in maternity care: report of a WHO Expert Committee).

2 WHO Handbook of resolutions and decisions, Volume II, 4th ed., 1981, p.125.

3 Ibid., p.125.

4 WHO Technical Report Series No. 534, 1973 (Continuing education for physicians: report of a WHO Expert Committee).

5 Ibid., p.29.

6 Ibid., p.30.

Chapter VI

EQUALITY OBJECTIVE : MIGRATORY FREEDOM FOR HEALTH PERSONNEL

Certain objectives may be formulated for quite understandable reasons, and yet the ctions taken to pursue them may lead to very undesirable side effects. This type of bjective in health manpower policy is well illustrated by the goal, articulated a few years fter the founding of WHO, to achieve cross-national equality in the qualifications of rofessional health personnel.

Advocacy of uniform international standards, in the preparation of physicians, dentists, urses and other health professionals was based on the argument that no country should accept econd-class quality in its personnel; every country's physicians and nurses should be as ell qualified as every other's. Such standards were also based ostensibly on a concept of one world", in which health personnel could move about freely in order to advance their ersonal careers or for other reasons. The ultimate consequences of this freedom, however, roved to be seriously contrary to the larger social interests of several countries.

International standards - Period I

As early as the Third World Health Assembly in 1950, a representative of India advocated 'the establishment of international standards of medical education", in order to facilitate a 'reciprocal recognition of qualifications".[1] Similar ideas were expressed at sessions of the Executive Board in 1950, some members of the Board even proposing a basic standard medical curriculum.[2, 3] Newly independent States understandably did not wish to be considered second-class with respect to the physicians their schools were preparing.

In the proposed programme and budget estimates for 1950, prepared in 1949, the discussion had even referred to "the possibilities of international medical licensure"; it was stated that "the increasing similarity in technical developments in various countries ... [decreases] the necessity for strictly national patterns of training".[4] Likewise, the very first meeting of the Expert Committee on Professional and Technical Education of Medical and Auxiliary Personnel, in outlining a long-term programme in that field, listed as a top objective: "working out international minimal standards of training".[5]

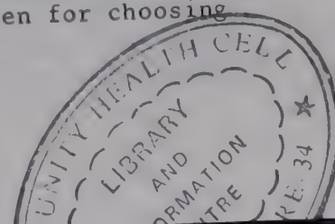
In spite of these various references to cross-national equality in the training of physicians, and even to their international licensure, no action was taken in Period I towards the attainment of such an objective. Perhaps one may interpret these statements as an affirmation of the dignity and pride of certain developing countries that understandably wanted to overcome any stigma associated with their former colonial status.

International standards - Period II

As noted in Chapter V, a need for international standards in medical education was again identified as a problem in 1952 at the Fifth World Health Assembly. But probably more important, as explained in Chapter III, the Expert Committee on Professional and Technical Education of Medical and Auxiliary Personnel, concluded in the same year that such global standards were "not feasible at the present time". Also, although reference was made in the First General Programme of Work (GPW1) to minimum international standards, the significant terminal clause was that the level should be compatible with each country's stage of development. The GPW2, moreover, referred only to the highest possible technical efficiency as a goal of education and training for each country, without any reference to international standards or reciprocity of academic degrees.

Yet it cannot be denied that an atmosphere of controversy surrounded the issue of manpower standards. Although no specific actions were taken to implement such standards, some discussants at governing body meetings clearly hinted at the importance of widely accepted standards to permit free migration of health manpower for study or even for choosing

HP-120
09285 N82



a place to practise medicine.[6] In the years 1952-1961, however, the movement of physi cians and other health workers from the less-developed to the more-developed countries wa not sufficiently great to be identified as a problem - either positively or negatively (se below).

Perhaps indicative of the mixed judgements and attitudes of WHO governing bodies abou international standards of medical education was a resolution passed by the Ninth Worl Health Assembly, in 1956 (WHA9.33). This resolution referred specifically to the proposa of the Government of India concerning "fixation of minimum educational standards on a international basis for doctors". The action recommended, however, was simply that th "Director-General ... study the proposal and its possible implications" and that he shoul "submit his observations in a report to a future session of the Executive Board".[7]

Quite significantly, it was not until seven years later, in 1963, that a report on thi question was actually submitted to the Executive Board. With so long a postponement o action on India's proposal, one might expect that some action would have been taken at th WHO regional level - particularly since New Delhi was the seat of the South-East Asi Regional Office. Study of the ET programme in SEARO during Period II, however, shows n activity along these lines. The only formal action related to medical education seemed t be a recommendation in 1954 that an authoritative national body be established in eac country of the Region to "prepare a reform of medical education".[8]

International standards - Period III

The study requested by the World Health Assembly in 1956 on "minimum educational stan- dards on an international basis" was finally implemented in 1962 (at the start of Period III) by convening a Study Group on Internationally Acceptable Minimum Standards of Medical Education.[9] The main declared intent of the proposed standards was to facilitate post- graduate education for physicians abroad. The recommendation concerned such matters as:

- suitable methods of medical student selection;
- prerequisite studies of 12 years, including mathematics, basic sciences and humanities;
- minimum of four full-time years of medical studies, plus a one-year internship;
- clinical subjects taught in ways suited to the environment of each country;
- a university setting desirable (but not mandatory);
- academic policy entrusted to the senior teachers, subject to governmental influence being kept to a minimum;
- availability of a general hospital;
- teachers of basic sciences should be full-time; and
- methods of evaluating the school should be feasible and available.

It would appear that the proposed standards were relatively elastic and subject to varying interpretations, except for those on the duration of studies (four years plus internship) and the full-time status of teachers of the basic sciences.

In spite of the painstaking work apparently put into the report of this Study Group, there is no evidence of any efforts by WHO to follow up the recommendations, listed above. Indeed, in 1967, an Interregional conference of directors of schools of public health was convened in order to explore "a procedure for mutual recognition of schools of public health and of [their] degrees and diplomas".[10] This conference concluded with a request to WHO to "Speed the eventual introduction of a procedure for mutual recognition of schools of public health on a voluntary basis ...".[11] Although WHO staff attempted to follow up this recommendation, it proved to be quite unfeasible to implement.

The two General Programmes of Work during Period III (GPW3 and GPW4), reviewed in previous chapters, refer to raising the quality of education of health personnel, and of promoting post-graduate training of administrators of health services, among other things. They make no reference, however, to any objective to attain internationally uniform stan- dards. Instead, the trend of WHO policy, particularly towards the end of Period III (1962-1972), seems to be emphasis on developing "curricula based on real local needs rather than copying".[12] Beyond this, in 1971, a World Health Assembly resolution WHA24.59 invited the Director-General to proceed with the study of medical school curricula in different countries "with a view subsequently to drawing up basic models" which would help developing countries planning new medical schools.[13]

Perhaps an indirect reason for this reluctance to follow up the issue of international andards was the identification in 1964, at the Seventeenth World Health Assembly of a new oblem: the "brain drain" or outflow of trained health personnel from countries that ready suffered from shortages of manpower (in relation to their actual needs). At this ealth Assembly there were two interventions on the issue, for the first time, and discussion the topic increased until the end of Period III. In 1972, at the Twenty-ninth World ealth Assembly, there were 24 interventions on the "brain drain" problem. As will be ecalled from Chapter III, the departure of trained health manpower from less-developed to ore-developed countries was perceived as the third-ranking problem on which interventions ere made during the eleven World Health Assemblies in Period III. Meanwhile, the goals of nternational standards and of equivalence of academic degrees were not found to be achiev- ole in practice. Instead, it was an undesirable migration of trained personnel mainly from eveloping to developed countries that came to occupy the centre of the stage in WHOs overning bodies.

Thus, towards the latter part of Period III, identification of the "brain drain" problem ssentially replaced the so-called need for international standards of professional education nd qualifications. No definite action was taken on either of these two counter-poising ssues until the very last year of Period III, when a definition of the term "physician" was ubmitted by the Executive Board to the Twenty-fifth World Health Assembly in 1972. The ssential non-universality and pluralistic nature of this definition is so striking that it s worth quoting it in full:

> "A physician is a person who, having been regularly admitted to a medical school, duly recognized in the country in which it is located, has successfully completed the prescribed course of studies in medicine and has acquired the requisite qualifications to be legally licensed to practise medicine (comprising prevention, diagnosis, treatment and rehabilitation), using independent judgement, to promote community and individual health."[14]

Despite the rather vague and highly relative nature of the Board's definition, it was still ot adopted or approved, but only "noted" by the Twenty-fifth World Health Assembly in its resolution WHA25.42. One may infer that this was the Assembly's way of providing a polite burial for the issue of international standards for medical qualifications, no longer considered a significant policy question.

On the closely related question concerning equivalence of medical degrees, to permit reciprocity of licensure between countries, the World Health Assembly was even less definitive in its further policy formulation. After calling upon the Director-General to "study ... criteria for assessing equivalence of medical degrees" in 1966 (resolution WHA19.53),[15] subsequent Health Assemblies were clearly not satisfied and asked repeatedly for further studies. Finally in 1970, the Twenty-third World Health Assembly simply called on WHO to "assist further the training of national health personnel at all levels ..." and to urge countries "... of each region to formulate a minimum standard of curriculum for training programmes for health personnel, taking into consideration the needs of the region". This decision in resolution WHA23.35 (1970) essentially recognized the possible value of reciprocity of credentials within any of the six WHO regions, but not between regions.[16]

"International standards versus "detrimental" migration - Period IV

By Period IV (1973-1980), the international professional standards and cross-national equivalence of academic degrees had become more of a matter for collaboration with UNESCO on reciprocal recognition of higher education studies, degrees and diplomas by countries. At the same time, the problems caused by cross-national migration of skilled health manpower had become prominent. In the Health Assemblies from 1973 to 1980 the "brain drain" was the fourth-ranking problem identified in interventions.

Regarding the increasingly vexed problem of the cross-national migration of health manpower from the less-developed to the more-developed countries, no definite action had been taken in Period III. In 1969, the Twenty-second World Health Assembly merely called upon, in one clause of a rather comprehensive resolution on health manpower development (WHA22.51),[16]

"the economically developed countries taking part in the training of physicians from t
developing countries to encourage graduates to return to work in their own countries."[17]

In 1971, the Assembly went somewhat farther in calling upon the Director-General, i
resolution WHA24.59:

"to proceed ... with study of the phenomenon of the outflow of trained professional an
technical personnel from developing to the developed countries ("brain drain") which ca
be detrimental to the training of national health personnel and to the health services o
the developing countries and to the prospects of international cooperation in tha
field."[18]

The next Health Assembly in 1972 reaffirmed the importance of the migration problem, an
resolution WHA25.42 called for a "comprehensive study to determine its causes and to fin
appropriate solutions".[19] At this Assembly there were discussions and some debate abou
whether it was appropriate for WHO to take any corrective actions on this problem, but ther
was clear agreement that it should be studied by the Organization. Hence, the majo
activity in Period IV of the Division of Health Manpower Development, apropos of th
"equality objective" as defined in this chapter, was a major international study of physicia
and nurse cross-national migration throughout the world.

Even before this extensive study was completed, the Twenty-ninth World Health Assembly i
1976 called on the Director-General "to collaborate with Member States ... in the developmen
of measures to control undesirable migration of health manpower" (resolution WHA29.72).[20]
This was, in fact, the first specific action proposed by the Assembly to cope with th
migration problem.

Before WHO began its comprehensive study of health manpower migration in the early 1970s
other studies of this phenomenon had been made in the Federal Republic of Germany, the
United Kingdom, the United States, and elsewhere. As a first step, therefore, WHO collabo-
rated with the US Department of Health, Education, and Welfare (Health Resources Administra-
tion) in the production of an extensive annotated bibliography on this matter in 1975.[21]
A further literature review was also done in collaboration with the University of Londor
School of Hygiene and Tropical Medicine. Then questionnaires, seeking statistical data on
the national inflow and outflow of physicians and nurses, were sent to governments throughout
the world, data being collected from 137 countries. Thirdly, more intensive studies were
made of 40 countries, selected because they had experienced a considerable inflow or outflow
of physicians, nurses, or both. It is not surprising that there were difficulties in
collecting this vast body of data, but a synthesis of all of it yielded a comprehensive
report that was published in 1979.[22]

Only the main findings and interpretations of this important study need be summarized
here. It was found that in 1972 some 6%, or (140 000) of the world's physicians were
located in countries other than their own or those in which they had been born or trained.
Approximately one-eighth of the world's output of physicians migrated annually - 86% of these
going to five affluent countries: Australia, Canada, Federal Republic of Germany, United
Kingdom, and United States of America. Foreign medical graduates accounted for one-fifth of
all physicians in the USA in 1974. By far the largest single donor country for physicians
was India, followed by the Philippines.[23]

Many more specific findings came from this extensive migration study, but certain of the
interpretative conclusions have such important implications for health manpower planning, in
both donor and recipient countries, that they should be summarized: the migration of
physicians and nurses between countries is not random, but depends on market pressures.
Out-migration results when a country produces more physicians than it can economically absorb
(or employ), regardless of its objective health needs. Similarly in-migration occurs when a
country can economically absorb more physicians than it has trained itself. "In many
developed countries the underproduction of physicians stems from the restrictive practices of
the medical profession".[23] On the other hand, "in many developing countries the over-
production of physicians results from the fact that the demand for medical education [and the
output of medical schools] is completely unrelated to the demand for physicians' services in
the same country."[24] Perhaps most important, the loss of physicians from donor countries
is related not so much to the potential services they might have rendered (but most likely
could not have been supported to render), as to the many resources that went into their

raining, which could have been more effectively used for training other more appropriate orms of health manpower (particularly auxiliary health workers).[25]

Thus a WHO study, stimulated by the problem of the migratory "brain drain" of physicians nd nurses mainly from less-developed to more-developed countries, ended up by providing owerful evidence for the need for rational manpower planning - if waste was to be avoided in eveloping countries and if the affluent industrialized countries were not to be the bene-iciaries of this extravagance. To remind the reader of the relationship of the migration henomenon to the focus of this chapter on cross-national "equality" of health personnel, it s appropriate to quote another of the specific conclusions of the migration study, namely:

> "International agreements promoting the international recognition of medical and nursing qualifications facilitate and, possibly encourage migration".[26]

The acuteness of the migration problem raised sensitivity also in the WHO Regions about his disturbing health manpower issue. In the African Region, for example, a study of the roblem was started in 1975, focusing on the loss of medical graduates from African countries. At the same time the Regional Committee for Africa launched "an appeal ... to the countries towards which the exodus of qualified personnel was directed to discourage settlement and promote rapid return."[27]

Around the mid-1970s, the acuteness of the "brain drain" problem appeared to lessen. Perhaps partially due to the worldwide attention aroused by the WHO discussions of, and research on, the issues - but doubtless also due to rising consciousness about the problem within countries - actions were taken that resulted in a reduction of the detrimental type of migration described above. The USA and Canada, for reasons of their own, began to restrict the immigration of foreign medical graduates around 1975.[28] Some donor countries, such as Egypt, considered reducing their output of new physicians.[29] The Sixth Report on the World Health Situation (for 1973-1977), published in 1980, summarized the developments as follows:

> "While the intercountry flow of physicians and nurses has increased during the past decade, its volume and direction are now changing. As a result of recent regulations in the key recipient countries, the flow from developing to developed countries is likely to decline. At the same time, major donor countries are beginning to take measures to increase the capacity of their respective health systems to retain trained personnel and use them properly ...".[30]

In a word, it would seem as though the harmful or socially inequitable effects of purely market forces, in the global production and use of health manpower are becoming slowly counteracted by deliberate social planning in countries. Exposure of the facts on this whole problem by both WHO and its Member States has doubtless helped to stimulate these corrective planning actions. This entire experience may help to convey the message that more important than cross-national equality of health personnel is the principle of training manpower - both in types and in quantities - most appropriate to the health needs and demands of each country.

References

1 WHO Official Records No. 28, 1950, p.205.

2 WHO Official Records No. 25, 1950.

3 World Health Organization. Executive Board sixth session: Standing Committee on administration and finance 1950. Geneva, 1950, pp.17-19. (Unpublished document EB6/AF/Min/3.Rev.1).

4 WHO Official Records No. 18, 1949, pp.119-120.

5 WHO Technical Report Series No. 22, 1950 (Report on the first session of the Expert Committee on Professional and Technical Education of Medical and Auxiliary Personnel), p.27.

6 Fülöp, T. Analytical review of the World Health Organization's health manpower development programme, 1948-1978. Geneva, World Health Organization, 1981. (Unpublished document WHO/EDUC/81.182).

7 WHO Handbook of resolutions and decisions, Volume I, 1948-1972, 1973, p.45.

8 World Health Organization Regional Office for South-East Asia. Medical education in South-East Asia; an analytical study based on the reports and observations of WHO consultants and staff, 1952-1953. New Delhi, 1954, pp.38-41. (Unpublished document SEA/RC7/5).

9 WHO Technical Report Series No. 239, 1962 (Report of a Study Group on Internationally Acceptable Minimum Standards of Medical Education).

10 WHO Technical Report Series No. 351, 1967 (Report of a WHO inter-regional Conference of Directors of Schools of Public Health), p.22.

11 Ibid., p.23.

12 WHO Official Records No. 178, 1969, p.21.

13 WHO Handbook of resolutions and decisions, Volume I, op. cit, pp.49-50.

14 Ibid., p.47.

15 Ibid., p.45.

16 Ibid., p.48.

17 Ibid., p.46.

18 Ibid., p.50.

19 Ibid., p.50.

20 WHO Handbook of resolutions and decisions, Volume II, 4th ed., 1981, p.124.

21 US Department of Health, Education, and Welfare. International migration of physicians and nurses: an annotated bibliography. Washington, DC, 1975 (DHEW Pub. No. (HRA) 75-78).

22 Mejia, A., Pizurki, H., & Royston, E. Physician and nurse migration: analysis and policy implications. Geneva, World Health Organization, 1979.

23 Ibid., p.399.

Ibid., p.404.

Ibid., p.403-405.

Ibid., p.405.

Vysohlid, J. Migration of health personnel of the African Region. Brazzaville, World Health Organization Regional Office for Africa, 1975, p.108. (AFRO Technical Papers No. 9).

U.S. Bureau of Health Manpower. Fact sheet: Health Professions Educational Assistance Act of 1976 (P.L. 94-484). Rockville, MD, 1977.

Gish, O. A study of the mechanism for recognition of foreign qualifications and experiences. Geneva, World Health Organization, 1980, p.3. (Unpublished document WHO/EDUC/80.180).

World Health Organization. Sixth report on the world health situation 1973-1977. Part I: Global analysis. Geneva, 1980, p.193.

Chapter VII

COVERAGE OBJECTIVE : HEALTH PERSONNEL TO SERVE ALL THE PEOPLE

The geographic maldistribution of health manpower has long been a serious problem in almost all countries - developing and industrialized. The most obvious feature of the problem is the shortage of health personnel in rural areas, while health workers - particularly physicians - are heavily concentrated in the cities. In developing countries, it is common to find four-fifths of the physicians located in a few large cities (sometimes in one metropolis) where 10 or 20% of the population live, while only one-fifth or fewer of the physicians work in rural areas, where 80 to 90% of the population live.[1] Even inside the borders of large cities there are often concentrations of physicians in affluent neighbourhoods, while slum areas are almost devoid of physicians.

Recognition of these health manpower distribution problems, as discussed in Chapter III, was expressed in WHO meetings from the first days of the Organization. In this chapter, we shall review the evolution of WHO health manpower policies to cope with them. The policy objective that gradually developed was to achieve full coverage of national populations with appropriate health personnel.

Achieving population coverage - Period I

Discussions of the overall shortages of health personnel in the first years of WHO were usually linked to comments about their maldistribution within countries. At the Third World Health Assembly, in 1950, when the maldistribution issue was raised, the delegate of France suggested a period of compulsory health service for physicians in areas of manpower shortage.[2] Such a policy had long been implemented in the USSR; in Mexico, a six-month period of social service for all new medical graduates had been required since the 1930s.[3] The issue was hotly debated, and several delegates argued that financial and other incentives were preferable to compulsion. No action was taken, however, on this matter.

The major strategy implemented in developing countries to achieve health service coverage in rural areas has undoubtedly been the training of auxiliary health workers of many types, though this strategy matured slowly. As early as 1949, in the very first Annual Report of the Director-General of WHO, there is a brief reference to Ethiopia's training programme for local health personnel, which was "continued and expanded with the assistance of WHO".[4] Although the meaning of the term "local health personnel" is not perfectly clear, it is further reported that:

> "Great progress was also made in the training of medical assistants, dressers and sanitary inspectors. At the request of the Ministry of Education, a first-aid and sanitation course was given to school dressers in Addis Ababa.[4]

Uncertainties in WHO policy on auxiliaries, nevertheless, were reflected in the type of assistance given to Ethiopia at this time. In 1949, in fact, WHO withdrew its international personnel from the programmes for training dressers, medical assistants, and others, concentrating instead "on granting a larger number of fellowships ... and on periodic visits of advisers and consultants".[5] The Ethiopian Government continued the training programme, however, according to a WHO official in an article written in 1952.

For the year 1950, the Director-General reported that in the South-East Asia and Eastern Mediterranean Regions, "emphasis was placed on specific needs in the training of auxiliary health workers".[6] In French Somaliland, a tuberculosis programme was reported, and local training of auxiliary medical personnel had been started in connexion with it. Likewise a rural health demonstration programme and teaching centre, sponsored by WHO and UNICEF, was operating in the Philippines with emphasis on maternal and child health services.[7] The next year, in 1951, one finds the same theme expressed in the Director-General's Annual Report, as follows:

"The shortage of trained professional health workers in many parts of the world, and t fact that some countries are unable to support highly trained personnel in many of the areas, have brought out the need for establishing a larger number of training programme for auxiliary workers ... among whom are assistant doctors, practical nurses, villag health workers, sanitary instructors and assistant midwives."[8]

In spite of generalized statements of this sort, the descriptions of specific fiel projects in countries leave doubts about the exact nature of the manpower being trained. References are made to local and national personnel, to nurses, to midwives, and to sanitar inspectors. Experience suggested, for example, that WHO's "effort in India should b devoted to strengthening medical and para-medical institutions and establishing loca training programmes and refresher courses".[9] It is far from clear, however, that thes activities involved the training of auxiliary health workers, in the sense in which this ter came to be used in later years. The "village health workers" referred to in the introduc tory section of the 1951 Annual Report are nowhere mentioned in the numerous country fiel projects described for that year.

Thus in Period I, with the possible exception of activities in Ethiopia - where training programme for medical assistants and dressers had been in process before WHO entere the scene - one does not find definite evidence of WHO involvement in the training o nonconventional auxiliary health personnel. There are various references to the potentia value of the idea, but little indication that WHO participated in its implementation. Aside from comments made in the World Health Assembly, the strategy of achieving rural populatio health care coverage through training and the use of auxiliary personnel did not advance beyond the stage of rhetoric in Period I.

Achieving population coverage - Period II

In Period II (1952-1961), not only did the rhetoric intensify about the importance of training health auxiliaries - manifestly parallel with the rising proportion of developing countries in WHO's membership - but some implementation of the concept became evident. It will be recalled that the need for training auxiliaries was the third-ranking problem identified in World Health Assembly interventions throughout these years. An Executive Board member from a developing country said in 1953 that "one of the most important types of assistance which WHO could provide for underdeveloped countries lay in the training of auxiliary personnel".[10]

As noted in Chapter III, nevertheless, even the advocacy of auxiliary personnel training in the 1950s evoked controversy. This was in spite of the unequivocal recommendations of expert committees, such as the one that met in 1955 and concluded:

"for the foreseeable future, and probably for many generations to come, the auxiliary health worker will be an essential member of the team providing health and medical services."[11]

Indeed, by 1960, an expert committee spoke of the importance of auxiliary personnel in the developed countries as well:

"The experience of developed countries shows that the need for auxiliary personnel does not diminish with the growth of professional personnel; the contrary is the case, and the demand for auxiliaries may be expected to continue and even to increase."[12]

The reasons offered for this view included the "reluctance of fully trained personnel to work in rural areas", as well as the wastefulness of employing "highly trained personnel in work which auxiliaries are capable of performing"[13] (involving the "efficiency" objective discussed later).

The question arises here: in what sense the term "auxiliary" was used in WHO in those early years. In spite of expert committee judgements, not until the Second General Programme of Work (for 1957-1961) could an explicit WHO statement on auxiliaries be seen:

"In many countries it is not yet practicable or possible to provide full professional services for the whole population. It is therefore necessary to train 'subprofessional' or auxiliary workers, and WHO should be ready to help in training them".[14]

It was in 1954, during Period II, that the renowned "Public Health College" at Gondar, Ethiopia, was formally launched (although we noted above the earlier training of dressers and medical assistants in Addis Ababa).[15] The Gondar training project was sponsored jointly by WHO and UNICEF, along with the United States International Cooperation Administration. Three types of auxiliary health worker were prepared, specifically to staff health centres in rural areas. The team leader, called a "health officer", was trained for three years following completion of secondary school; the nurse-midwife auxiliary was trained for two years following completion of elementary school; the sanitation auxiliary was trained for one year following enough schooling (4 to 6 years) to acquire literacy. The field exercises of these three types of trained auxiliary were carried out together in rural health centres.[16]

In some countries, health auxiliaries intended specifically for rural areas were described as "assistant doctors" - for example, in Iran and Somalia.[17] In 1953, there was started in a northern province of Malaya (Kedah) at the town of Jitra a model rural health centre, along with a training programme for three types of auxiliary worker: assistant nurse, assistant midwife, and assistant sanitary inspector. From the outset, this project was assisted by the WHO Western Pacific Regional Office, and when national independence was acquired by Malaysia in 1957, the extension of the Jitra model throughout the country became known as the Rural Health Services Scheme, in both its training and service aspects.[18] A significant sidelight of this programme was its origin in candid response to the anti-government guerilla movements that had been especially strong after the Second World War in the northern provinces, such as Kedah.[19] Steady progress has been reported in the Malaysian Rural Health Services Scheme, with nearly complete national coverage (in Peninsular Malaysia) achieved by 1977.[20] The hundreds of health centres and health stations in this impressive programme became staffed principally by the auxiliaries trained at Jitra, and later at a second training centre in the southern town of Rembau.

Other somewhat similar health auxiliary training programmes were launched in Period II, with the collaboration of WHO, in Laos (for preparing officiers de santé) and in Papua New Guinea (for preparing assistant medical officers).[21] In Libya a school for training health assistants was started at Benghasi in 1955, and a similar school opened in Nepal in 1956.[22] In Zanzibar, the same kind of project was started in 1957, although the trainees were mostly attracted to curative services.[23] In Suva, Fiji, a school for training "native medical practitioners" had been functioning since 1884, and it was expanded in 1928 with aid from the Rockefeller Foundation.[24] WHO began to provide collaborative support for this school, known at the time as the Central Medical School, in 1955.[25] The trend after this date was towards continued upgrading and in 1961 the school's name was changed to the Fiji School of Medicine, and students were prepared "to a standard acceptable for registration in medicine and dentistry for work in the South and Central Pacific".

Altogether, in Period II, there was a definite expansion of country projects, with WHO participation, for training health auxiliaries - predominantly for rural areas. These grew from 8 such projects in 1952 to 30 in 1961.[26] Even though these constituted only a small fraction of all WHO projects in education and training, they grew from 9.1% of all ET projects in 1952 to 16.7% in 1961. The output of field training projects was often limited by a lack of suitable teachers. Still, at the end of the period, in 1961, the Director-General could report that special attention was being given to auxiliary personnel training

> "as a speedy means of providing for the operation of new services. In newly independent countries the need for auxiliary health personnel is particularly acute, as they are required to undertake some of the work of health services after the departure of foreign professional health workers, until enough fully trained national replacements are available".[27]

The cautious terminal clause seemed to imply that auxiliaries were really a temporary expedient (until fully trained national replacements became available).

In Period II, for special sociocultural reasons (including the opposition of the medical profession), the countries of Latin America were particularly hesitant to train auxiliary personnel with a broad scope of functions. There were, indeed, some auxiliary personnel trained, but their scope of work was intended to be narrow - such as personnel to assist for a limited time in home deliveries in Panama.[28] Another type of auxiliary was trained only to assist sanitary inspectors and operators of water treatment plants.[29]

The number of "medical assistants" - a term used often to distinguish general healt auxiliaries from "assistant nurses" or "assistant sanitary inspectors" - produced durin Period II is far from clear. Very few countries sent any reports on them to WHO. In th years around 1950, there were only reported to be a total of 1700 medical assistants in l developing countries; around 1960, reports were received from 27 developing countries aggregating to 4800 such personnel.[30] The countries reporting nursing and midwifer auxiliaries, on the other hand, numbered 17 in 1950, growing to 57 around 1960. Th accuracy of data on both of these general categories of health auxiliary, of course, coul not have been great. Apropos of geographical coverage, however, it is very likely that th medical assistants reported were providing services principally in rural areas.

Achieving population coverage - Period III

In Period III (1962-1972), the lingering uncertainties about WHO policy on trainin multi-purpose auxiliary health personnel specifically as a strategy for achieving improve coverage of rural populations gradually declined. Training auxiliary health personne slowly but definitely ascended to a high priority in WHO, reflecting the evolving attitude and actions in Member States. Among problems identified in interventions at the eleve World Health Assemblies in the period, as reported in Chapter III, the need for trainin auxiliary personnel rose to the second in rank; indeed, if one were to aggregate with thi the 1.8% of interventions classified as lack of rural health personnel, this issue implying need for total population coverage would have ranked as problem number one.

In the first part of Period III - that is, in the early 1960s - some objections were still raised about auxiliaries, as meaning a sacrifice of health care quality for the sake of quantity. For example, the representative of a developing country in Africa said at the 1962 World Health Assembly: "it has not been deemed necessary to encourage the training of medical auxiliaries in an attempt to overcome our temporary shortage of doctors".[31] By the late 1960s, however, such arguments appeared to simmer down to semantics about the "labels to be attached to different categories of health workers".[32] At a 1968 meeting of the Executive Board, the issue was summarized substantially as follows:

> "in both the economically developed and the developing countries, the doctor alone could not deal with all the health problems of a given area, and he needed a team of assistants to help him. Without auxiliaries no health service could come to grips with all its problems. It was hard to see how the health services in a developing country could be organized without such assistants".[33]

Thus, by the period 1967-1972, when the Fourth General Programme of Work was to take effect, the language of GPW4 called for the new or improved "training of the various categories of professional and auxiliary health personnel".[34] By 1970, in the Technical Discussions of the World Health Assembly, one of the conclusions of the report on "Education for the Health Professions" was "a reasonable distribution of functions between professional health workers and auxiliaries, with emphasis on team work".[35] Indeed, even in 1962 - when the Fifteenth World Health Assembly had proposed several manpower targets for under-developed countries by 1970 - among them was not only "one physician per 10 000 population" but also "one health auxiliary per 1000 population".[36] These were, in fact, targets seted for the First United Nations Development Decade. In 1971, the WHO/UNICEF Joint Committee on Health Policy proposed that priorities for ET programmes include specifically "auxiliary training".[37] This proposal was approved by the Executive Board in 1971, when it was also added that greater emphasis should be put "on training for the needs of rural areas, less on hospital-based education and its concentration on rare diseases".[38]

As significant as these various policy formulations in Period III were the actual developments in programmes for training auxiliary personnel to cover rural populations. Thus, the number of developing countries reporting to WHO that medical assistants were working in their health systems rose from 27 in 1960 to 38 in 1970; the count of these personnel reported, moreover, rose from 4 800 in 1960 to 13 270 in 1970.[39] The number of schools in developing countries for training medical assistants had increased by 34 during Period III to a total of 68 (as of 1973) located in 38 countries.[40] (In Period II, such schools had increased by only 18.) Assignments of WHO visiting teachers to schools for auxiliaries had risen from 6 in 1962, constituting 6.3% of 95 such assignments, to 64 in 1972, constituting 20.4% of 314 such assignments that year.[41] Even health manpower

esearch, coordinated by WHO and starting in 1969, was focused on, among other things, the omparative training and performance of health auxiliaries in three countries: Brazil, gypt, and Hungary.[42]

This growth of medical assistant training, mainly for rural area coverage, must still be nterpreted in a proper perspective. Thus, in 15 of the countries reporting medical ssistants, their total number was smaller than 100; in 28 of the 38 developing countries eporting use of these auxiliaries at the end of the period, their ratios were only 1 per 10 00 population or fewer. Even in Ethiopia, where medical assistants had been trained since he 1940s, their total number reported in 1972 was only 166. One contributory explanation f these essentially modest achievements, between 1962 and 1972, was the policy in several ountries to upgrade their medical assistants to fully-qualified physicians - who would then end to settle in the main cities. Such upgrading strategies were followed in Burundi, Cambodia, and Rwanda, as well as in Fiji and Ethiopia (both discussed earlier). Even in the Congo (now Zaire), where WHO emergency action had been launched on that country's attainment of independence in 1960, the crash programme to produce African physicians through training in Europe had involved the upgrading of some 140 former Congolese medical assistants.[43]

Yet, by the end of Period III, the attention of WHO became clearly focused on the severe and persistent deficiencies in health coverage of rural populations, particularly throughout the developing world. The basis for corrective actions was well summarized by a WHO staff member from the Division of Health Manpower Development, who wrote in 1972:

> "Its vast and growing size, its isolation, its low standard of living, and its attitude of withdrawal into itself are the fundamental characteristics of the world's rural population, which represents the majority of mankind ... Compared to the urban population, which is always the first to reap the benefits of progress, the rural population is under privileged and cannot satisfy its health needs.
>
> The health services must therefore be organized in such a way that they reach all the population of a country, bringing the benefits of both preventive medicine and individual care and establishing an order of priorities for meeting the needs.
>
> It will then be possible to train a staff capable of providing a basic minimum of services to people who have hitherto been completely without health care, by turning out larger numbers of auxiliary personnel, ensuring they are constantly supervised, and giving them the necessary mobility to reach the population of the remoter areas."[44]

This account of the policies and programmes of WHO to attaining adequate health manpower coverage of rural populations in Period III would not be complete without reference to the feldsher of the USSR - a medical assistant trained originally to serve rural people in the nineteenth century. Although they had been extensively used for decades, it was not until a WHO expert committee meeting convened in 1967 that the curriculum for training the Soviet feldsher was presented and published.[45] The focus of this expert committee meeting was on the training of medical assistants and similar personnel, and the importance of this subject for the objective of geographic coverage of countries with health services was made quite explicit:

> "In most countries where the physician/population ratio has improved, the maldistribution of physicians within the country constitutes an almost insurmountable problem ... In very small communities, where it would be uneconomical to employ qualified physicians, medical assistants can do very useful work."[46]

It was not to be until later, however, that WHO sponsored a thorough study of the training and use of the feldsher in the USSR. In fact, the entire challenge of total population coverage in developing countries - largely through the training of auxiliary health personnel and their appropriate deployment in health teams - did not become a WHO objective of the very highest priority until Period IV. Even then, some of the old resistance continued, but at the level of formal WHO policy the crucial importance of the training and utilization of health auxiliaries as members of health teams, became established.

Achieving population coverage - Period IV

The circumstances accounting for the strong thrust in Period IV (1973-1980) towards achieving <u>total</u> population coverage with health services have been reviewed in Chapter III.

The spirit of detente between the major world powers, the United Nations declaration on a Ne International Economic Order, the growing worldwide scepticism about excessive technology the steadily strengthening voice of developing countries - all these factors combined t sharpen the demands for equity in health care for all people. In the field of healt manpower these forces clearly yielded, among other things, strategies for attaining complet geographic coverage of countries with appropriate health personnel - not as some distan future goal, but as soon as possible.

Intrinsically linked to the objective of total population coverage were the requirement for training and deployment of large numbers of appropriate auxiliary personnel - number sufficient to meet the needs of the millions of people in developing countries, predominantl rural, to whom any type of modern health service was inaccessible (although, in contrast t modern, certain traditional healing services might be available). Thus, as reported i Chapter III, the top-ranking problem identified in the six World Health Assemblies hel during Period IV was the need for auxiliary health personnel, followed, furthermore, by th closely related need for primary health care personnel. In addition, related to the issu of coverage, other issues identified often enough to be among the main problems were th maldistribution of personnel within countries (number 14) and problems on practitioners o traditional medicine (number 20).

The General Programmes of Work in this period - GPW5 (1973-1977) and GPW6 (1978-1983) - it will also be recalled, stressed the adaptation of programmes to the special needs of eac country, and the provision to governments of collaboration that would "foster the quickes possible self-reliance".[47] The element of speed and self-reliance could only be inter- preted, in developing countries, to mean the training of health personnel that could be carried out within the country and with the human resources now available. In GPW6, this approach was explicitly stated as follows:

> "Skills have to be developed in accordance with tasks to be performed ... Since it is most unlikely that developing countries will have adequately trained professional health manpower in sufficient numbers within a reasonable period of time, initially other solutions may have to be adopted by them, such as the training and use of auxiliary health personnel and traditional healers and midwives".[48]

The culmination of formal policy declaration to achieve coverage of total populations, rural and urban, with effective comprehensive health care came in a resolution of the Twenty-eighth World Health Assembly in 1975 (WHA28.88); the Assembly first reaffirmed previous resolutions and decisions:

> "concerning especially the need to encourage the provision and expansion of effective, comprehensive health care to meet the right of access to such care for all people ... Emphasizing that such primary health care can be most effectively provided within a comprehensive national health system appropriate to the conditions and needs of each country ..."

and then continued:

> "Urges Member States to take the necessary steps to develop and implement plans of action in the area of primary health care, leading to the provision of a comprehensive health care system to the total population"

and also requested the Director-General:

> "to encourage Member States to train and use health personnel with appropriate levels of skills within an organizational structure which ensures their effective support and guidance ...".[49]

A year later in 1976, resolution WHA29.19[50] approved the convening by WHO and UNICEF of an International Conference on Primary Health Care, to be held in 1978 in the USSR.

At the epochal International Conference on Primary Health Care, held in September 1978 at Alma-Ata, USSR, the goal of universal coverage of the population with needed health care was made crystal clear. The final report of the Conference contains such statements as: "Primary health care aims at providing the whole population with essential health care ..."[51] This care must be "properly accessible", and:

"Accessibility implies the continuing and organized supply of care that is geographically, financially, culturally and functionally within easy reach of the whole community ... Geographic accessibility means that distance, travel time and means of transportation are acceptable to the people."[51]

pecifically with respect to health personnel, the report continues:

The types of health worker will vary by country and community according to needs and the resources available for satisfying them. Thus, they may include in different societies people with limited education who have been given elementary training in health care, 'barefoot doctors', medical assistants, practical and professionally trained nurses, feldshers, and general medical practitioners, as well as traditional practitioners."[52]

Throughout the report of the Alma-Ata Conference the objective of universal population coverage with primary health care is repeatedly emphasized, and equally clear is the proposition that such an objective should be reached with the use of various types of health personnel, including auxiliary health workers. As noted above, however, the Alma-Ata Conference was not a beginning, but rather an historic milestone in developments aiming at assuring the availability of modern health care to all. In 1973, under the term "front line health personnel", local primary health workers were already being promoted as one of the major tasks of WHO's HMD programme. A staff member of that programme wrote that year:

"Clearly all health personnel contribute to development, but it is worth noting the privileged position of front line personnel, who live among the people and meet their basic health needs".[53]

Illustrative of activities at the WHO regional level was a symposium in the Region of the Americas on Medical Auxiliaries, held in 1973 and manifestly intended to overcome previous resistance in that Region to the training and use of such health workers. The objectives of both coverage and efficiency (next chapter) are clearly implied by a statement in the proceedings of this symposium:

"The acute shortage and maldistribution of professional health personnel, not only in developing but also in developed countries, make it necessary to train large numbers of auxiliary personnel to serve as 'multipliers' of the professional staff. The role of auxiliary health personnel thus has a two-fold aspect: to relieve professionals of simple tasks which do not necessarily require their level of competence, and to cater to a population which would not otherwise be covered by health services".[54]

Numerous WHO-supported field projects for training medical assistants in this period attracted attention, such as the one operated by the Algerian Ministry of Health in Constantine.[55] It is noteworthy that the old Fiji school for native medical practitioners, which had been upgraded to a school of medicine in 1961 (end of Period II), reinstated its 3-year course for medical assistants in 1975.[56] In 1974, WHO collaborated with the United States Government in conducting an international conference in Washington, DC, on The Medical Assistant.[57] In the WHO Western Pacific Regional Office, a seminar on medical assistants, attended by participants from 13 countries, was held in October 1974.[58]

In 1977, still prior to the Alma Ata Conference, a WHO expert committee met to discuss the entire question of training and utilization of auxiliary personnel for rural health teams in developing countries. Among its several recommendations, one states:

"The Committee recommends the development of educational programmes for front-line and intermediate-level health personnel that are relevant to the priority health needs of the community and adaptable to local conditions, resources, and facilities. The type of technology used in these training programmes of front-line and intermediate-level health personnel should aim at relevance, competence, and greater self-reliance."[59]

Another question related to auxiliary personnel that emerged in Period IV, and that was clearly significant for population coverage was that of recognizing (rather than ignoring or opposing) a place for practitioners of traditional medicine in national health systems. In 1976, the Twenty-ninth World Health Assembly adopted a resolution (WHA29.72), requesting the Director-General:

"to encourage the development of health teams, trained to meet the health needs o populations, including health workers for primary health care and taking into account where appropriate, the manpower reserve constituted by those practising traditiona medicine."[60]

In 1977, the Thirtieth World Health Assembly went further and adopted a resolution (WHA30.49 that urged:

"interested governments to give adequate importance to the utilization of their tradi tional systems of medicine, with appropriate regulations as suited to their nationa health systems"

and requested the Director-General:

"to assist Member States to organize educational and research activities and to awar fellowships for training in research techniques, for studies of health care systems an for investigating the technological procedures related to traditional/indigenous system of medicine".[61]

Even before the Thirtieth World Health Assembly, the Regional Committee for South-Eas Asia took action to study "alternative approaches to meeting the basic needs of the people i developing countries by the use of such systems of medicine in conjunction with moder medicine", emphasizing the value of selecting and using "the best from both".[62] Then, i 1978, but still prior to the Alma-Ata Conference, a formal meeting was held in Geneva on the promotion and development of traditional medicine. Among other things, this meeting recom mended that Member States in collaboration with WHO should "promote manpower development i traditional medicine" by:

"organizing educational activities in traditional medicine either by establishing new training centres or by revising existing curricula to include subjects related to tradi tional medicine".[63]

Still further indication of the more positive attitude towards auxiliary health personnel in Period IV was the survey launched in 1973 on schools for training medical assistants throughout the world. On the basis of this survey WHO published in 1976 a World Directory of Schools for Medical Assistants, defining these personnel as:

"a health worker with 8-9 years' basic general education, followed by 2-3 years' techni cal training that should enable him [or her] to recognize the most common diseases, to care for the simpler ones, to refer more complicated problems to the nearest health centre or hospital, to carry out preventive measures, and to promote health in his [or her] district".[64]

Also significant was the substantial recognition given to the feldsher of the USSR in Period IV, even though these health auxiliaries had been serving rural and urban populations for nearly a century. At the invitation of WHO, the Ministry of Health of the USSR prepared a comprehensive account of the training and utilization (functions) of these important per sonnel that was published in 1974.[65] Still other reports and directories on the training of auxiliary personnel were published in this period.

Finally, note must be taken of the worldwide attention attracted in Period IV by the achievements reported on the massive training of "barefoot doctors" in the People's Republic of China - principally to serve rural populations.[66] There were great variations in the training and use of these auxiliary health workers, but among the predominant features were: (a) his or her selection by the people to be served; (b) the relatively short (3 - 6 months) period of training at a health centre or local hospital, followed by periodic continuing education; (c) the use of a combination of modern and traditional medicine in the training (including medicinal herbs and acupuncture); (d) the part-time function of these health workers, who could then continue working as peasants in agricultural communes; (e) occupa tional mobility - with the possibility of advancing to become physicians; (f) the provision of training at a facility nearby, to which teachers would come, if necessary, from a distant city; and (g) flexibility in local training and working schedules, on the basis of condi tions and decisions in each commune.[67]

Although the overwhelming emphasis of this massive programme for training and utilization of "barefoot doctors" was on local decision-making and local self-reliance within each of China's 50 000 communes, the general policy behind it was promulgated throughout this huge country from the central Ministry of Health in Beijing, by the communication channels of the controlling political party.[68] The basic policy decision to carry out this vast training programme was made in the late 1960s, when the national political leadership recognized that all the governmental health activities since China's liberation in 1949, had not succeeded in achieving coverage of the rural population with even elementary preventive and curative services. At the rate that China's medical schools could produce physicians, it would be centuries before the rural population would be served. With the remarkable motivation and political commitment characterizing China at this time, the training and employment of barefoot doctors proceeded so rapidly that by 1978 it was estimated that some 1 800 000 of these health auxiliaries had been trained.[68] (Since China's population of about 900 000 000 is said to be 80% rural, this would mean that, for 720 000 000 rural people, barefoot doctors were available in the communes at a ratio of 1:400 - although there were, of course, great variations between provinces.)

WHO recognized the importance of this achievement by organizing study tours of health leaders of many nations.[69,70] The report emanating from one of the study tours provided detailed information not only on the functions and training of barefoot doctors, but on the whole system of health service organization in China. In conclusion, the members of the study tour stated how they were:

> "impressed by the outstanding achievements of the Chinese health services in extending coverage to, and dramatically improving the health status of, all its people. This objective has been attained in a surprisingly short period of time, and the achievements are all the more spectacular, considering the unacceptable health conditions prevailing before Liberation. The Study Tour also considers that the country has developed unique solutions to solve its health problems and (solutions) which are completely suited to its conditions and environment".[71]

In a word, the objective of total population coverage with at least basic preventive and therapeutic health services - formulated after 1978 as primary health care (with a much broader meaning) - became in Period IV a health manpower objective of the highest priority. More than this, it became a central policy of the World Health Organization as a whole. In 1977, resolution WHA30.43 even formulated this objective with a target date (later reinforced at the Alma-Ata Conference) in these words:

> "The main social target of governments and WHO in the coming decades should be the attainment by all citizens of the world by the year 2000 of a level of health that will permit them to lead a socially and economically productive life."[72]

In developing countries, the implementation of this policy objective as being principally though, of course, not exclusively pursued through the development of training programmes for auxiliary health personnel who would be assigned, under appropriate supervision, mainly to rural posts. By 1977, the number of countries reporting such medical assistants working in their health systems had risen from 38 at the end of Period III to 57, plus 9 developed countries. In this total of 66 countries, 33, or 50% had 1.0 or more medical assistants per 10 000 population, although the other 50% had fewer than this modest ratio.[73]

It was possible for the Sixth Report on the World Health Situation, 1973-1977 to state (in contrast to previous such reports) that "a more rapid growth in the number of middle- and lower-level personnel than in the number of higher-level personnel can be noted in many developing countries".[74] The training programmes for these health workers demonstrated an enormous variety of approaches and terminology. Common denominators of nearly all these programmes, however, were: the relative shortness of their training (in comparison with "conventional" health professionals); the selection of students mainly from the rural communities in which they were expected to work; the usual location of training schools in or near the rural regions to be served; the use in teaching of indigenous languages (rather than foreign tongues of previous colonial powers); the general emphasis on maximum participation of local communities both in the training and in the utilization of auxiliary health personnel; and the efforts exerted to use them as members of health teams, of logically built-up health services in which two-way communication in forms of supervision and referral possibilities are constantly assured.

References

1 "The urban and rural distribution of medical manpower". WHO Chronicle, 22(3): 100-105 (1968).

2 WHO Official Records No. 28, 1950.

3 Roemer, M.I. Medical care in Latin America. Washington, DC, Pan American Union, 1963.

4 WHO Official Records No. 24, 1950, p.26.

5 Messinezy, D.A. Starting a health personnel training programme for Ethiopia. Bulletin of the World Health Organization, 6(3):357 (1952).

6 WHO Official Records No. 30, 1951, p.30.

7 Ibid., p.137.

8 WHO Official Records No. 38, 1952, p.27.

9 Ibid., p.95.

10 World Health Organization. Executive Board eleventh session; minutes of the twenty-fourth session. Geneva, 1953, p.18. (Unpublished WHO document EB/Min/24, Rev.1.)

11 WHO Technical Report Series No. 109, 1956. (Expert Committee on Professional and Technical Education of Medical and Auxiliary Personnel: third report), p.19.

12 WHO Technical Report Series No. 212, 1961 (The use and training of auxiliary personnel in medicine, nursing, midwifery, and sanitation; ninth report of the Expert Committee on Professional and Technical Education of Medical Auxiliary Personnel), p.5.

13 Ibid., p.6.

14 WHO Official Records No. 63, 1955, p.419.

15 World Health Organization Regional Office for the Eastern Mediterranean. Regional Committee seventh session; minutes of the third meeting, 1957, p.8. (Unpublished WHO document EM/RC7A/Min/3. Rev.1).

16 Chang, W.P. Ethiopian experience in health manpower training - a review of the Public Health College. Tropical and Geographical Medicine, 30(1): 147-154 (1978).

17 World Health Organization Regional Office for the Eastern Mediterranean. Annual Report of the Regional Director to the eleventh session of the Regional Committee. Alexandria, 1961, pp.17-18 (Unpublished WHO document EM/RC11/2).

18 Roemer, M.I. Development and current spectrum of organized health services in a new asian country: Malaysia. In: Health care systems in world perspective. Ann Arbor, MI, Health Administration Press, 1976, pp.39-59.

19 Ness, G.D. Bureaucracy and rural development in Malaysia. Los Angeles, University of California Press, 1969, p.99.

20 World Health Organization. Sixth report on the world health situation 1973-1977, Part II: Review by country and area. Geneva, 1980, pp.348-354.

21 World Health Organization Western Pacific Regional Office. Eleventh annual report of the Regional Director. Manila, 1961, p.38. Unpublished WHO document WP/RC12/2).

22 WHO Official Records No. 75, 1957.

23 WHO Official Records No. 90, 1959.

24 Pathik, B. & Goon, E. Fiji School of Medicine, Suva, Fiji: from medical assistants to physicians. In: Katz, F.M. & Fülöp T., ed. Personnel for health care: case studies of educational programmes. Geneva, World Health Organization, 1978 pp.79-96. (Public Health Papers No. 70).

25 Wainwright, R.B. Fiji School of Medicine; assignment report, Manila, World Health Organization Regional Office for the Western Pacific, 1979. (Unpublished document).

26 Fülöp, T. Analytical review of the World Health Organization's health manpower development programme, 1948-1978", Geneva, 1981. (Unpublished document WHO/EDUC/81/182).

27 WHO Official Records No. 114,1962, p.88.

28 Springer, E.C. El servicio de partos a domicilio como práctica para las auxiliares sanitarias en Panama. Boletín de la Oficina Sanitaria Panamericana, 39(3): 250-259 (1955).

29 Ruíz, P. Adiestramiento de personal auxiliar de saneamiento en las Américas. Boletín de la Oficina Sanitaria Panamericana, 41(2): 111-120 (1956).

30 World Health Organization. World Health Statistics Annual 1962, Volume III. Geneva, 1966.

31 WHO Official Records No. 119, 1962, p.83.

32 World Health Organization. Executive Board forty-first session; summary record of the first meeting. Geneva, 1968, p.14. (Unpublished WHO document EB41/SR/1 Rev.1).

33 Ibid., p.11.

34 WHO Official Records No. 143, 1965, p.67.

35 Education for the health professions; technical discussions at the Twenty-third World Health Assembly. WHO Chronicle, 24 (10):449 (1970).

36 WHO Official Records No. 128, 1962, p.81.

37 WHO Official Records No. 195, 1971, p.19.

38 World Health Organization. Executive Board forty-eighth session; summary record of the second meeting. Geneva, 1971, p.21. (Unpublished WHO document EB48/SR/2 Rev.1).

39 World Health Organization. World Health Statistics Annual 1972, Volume III. Geneva, 1976.

40 World Health Organization. World directory of schools for medical assistants. Geneva, 1976.

41 Fülöp, T., op. cit.

42 Analysis of health manpower functions: findings in Brazil, Egypt and Hungary - a WHO research programme. WHO Chronicle, 33(2): 39-44 (1979).

43 The Congo experiment. WHO Chronicle, 24(10):453-456 (1970).

44 Flahault, D. "The training of rural health personnel". WHO Chronicle, 26(6): 249 (1972).

45 WHO Technical Report Series No. 385, 1968 (Training of medical assistants and similar personnel: seventeenth report of the WHO Expert Committee on Professional and Technical Education of Medical and Auxiliary Personnel), p.18.

46 Ibid., p.8.

47 WHO Official Records No. 193, 1971, p.68.

48 WHO Official Records No. 233, Annex 7, 1976, p.74.

49 WHO Handbook of resolutions and decisions, Volume II, 4th ed., 1981, pp.44-45.

50 Ibid., p.45

51 Alma-Ata 1978. Primary health care, Geneva, World Health Organization, 1978 ("Health for All" Series, No. 1), pp.58-59.

52 Ibid., pp.61-62.

53 Flahault, D. "The training of front line health personnel - a crucial factor in development". WHO Chronicle, 27(6):241 (1973).

54 Pan American Health Organization. Medical Auxiliaries: proceedings of a symposium held during the twelfth meeting of the PAHO Advisory Committee on Medical Research. Washington, DC 1973, p.4. (PAHO Scientific Publication No. 278).

55 Laib, A.M. & Goriup, S. Experiment in Algeria. World Health, June 1972, pp.16-20.

56 World Health Organization Regional Office for the Western Pacific. Twenty-sixth annual report of the Regional Director to the Regional Committee for the Western Pacific. Manila, 1976, p.12. (Unpublished document WPR/RC27/3).

57 Pitcairn, D.M. and Flahault, D., ed. The medical assistant: an intermediate level of health care personnel. Geneva, World Health Organization, 1974 (Public Health Papers No. 60).

58 Watson, E.J. Meeting community health needs: the role of the medical assistant. WHO Chronicle, 30(3): 91-96 (1976).

59 WHO Technical Report Series No. 633, 1979. (Training and utilization of auxiliary personnel for rural health teams in developing countries: Report of a WHO Expert Committee), pp.20-21.

60 WHO Handbook of resolutions and decisions, Volume II, 4th ed., 1981, p.124.

61 Ibid., p.48.

62 Traditional medicine - views from the South-East Asia Region. WHO Chronicle, 31(2): 48 (1977).

63 WHO Technical Report Series No. 622, 1978. (The promotion and development of traditional medicine: report of a WHO meeting), p.39.

64 World Health Organization. World directory of schools for medical assistants. Geneva, 1976, p.9.

65 The training and utilization of feldshers in the USSR: a review prepared by the Ministry of Health of the USSR for the World Health Organization. Geneva, World Health Organization, 1974. (Public Health Paper No. 56).

66 Wang, V.L. Training of the barefoot doctor in the People's Republic of China: from prevention to curative service. International Journal of Health Services, 5: 475-488 (1975).

67 Basch, P.F. International health. New York, Oxford University Press, 1978, p.284.

68 Roemer, M.I. Health care systems in world perspective. Ann Arbor, MI, Health Administration Press, 1976.

69 World Health Organization. Study tour on the training and utilization of barefoot doctors in community health services in the People's Republic of China. Geneva, 1978, p.14. (Unpublished WHO document INT/78/034).

70 Vysohlid, J. Analytical review of the World Health Organization's health manpower development programme, 1948-1978: document analysis by WHO regions. Geneva, World Health Organization, 1980, Part IV, p.128. (Unpublished WHO document).

71 World Health Organization. Study tour on the training and utilization of barefoot doctors in community health services in the People's Republic of China". op. cit., p.39.

72 WHO Handbook of resolutions and decisions, Volume II, op. cit., p.1

73 World Health Organization. World health statistics annual 1980: health personnel and hospital establishments. Geneva, 1980.

74 World Health Organization. Sixth report on the world health situation, 1973-1977, Part I: Global analysis. Geneva, 1980, p.183.

Chapter VIII

EFFICIENCY OBJECTIVE : AVOID WASTE IN TRAINING AND PERFORMANCE

Not all objectives of health manpower policy are as explicit as the ones discussed in the previous chapter on attaining population coverage; some are implicit, lying behind goals expressed in other ways. Such a policy objective has been that of efficiency in the training and performance of health personnel.

Background reasons

The issues underlying various strategies for improving efficiency in health manpower field are largely economic. That is, the cost of training and using a stated type of health personnel may be unnecessarily high; or the cost of providing a stated type of health service may be excessive because the service is furnished by personnel more expensive than necessary or because it uses patterns of work which are wasteful. In other words, a goal of efficiency in health manpower implies that the cost of providing a given service (e.g., an immunization or dressing a minor wound) should be no higher than is necessary or reasonable for its proper performance. Hence, if a briefly trained and modestly salaried health worker can give an immunization perfectly well, it is wasteful and inefficient to have a lengthily trained and highly paid health professional do it. The use of less expensive health worker may, indeed, require supervision and various other conditions for assuring that the work is properly done, and the costs of these factors must be recognized. Nevertheless, taking everything into account, the most efficient policy is that which achieves the desired output (such as a health service of proper quality) for the lowest overall cost or input.

Unlike the policy objectives discussed in previous chapters, the attainment of greater efficiency, as such, has not been very clearly articulated in WHO discussions and deliberations. It has, nevertheless, been definitely implicit in decisions made on health manpower programmes. The non-articulation of an objective of efficiency or avoidance of waste may have been because the rationale for such a goal has been too obvious to state; the reasons may have been taken for granted.

The manifest poverty of developing nations has obviously meant that they have no money or resources to waste. Every unit of wealth available - in manpower or in any other asset - must be used in the most prudent way possible. Quite aside from the many influences on the distribution of resources, whether equitable or not, the total quantity of resources in developing countries has been so seriously below the needs that every way has had to be sought to make maximum use of the resources available.[1]

Even in the most affluent developed countries, there have been many reasons for governments and community leaders to search for maximum efficiency in the use of health personnel as well as in their training. With increasing capabilities of medical science, rising demands for medical care, the reduction of constraints on demand by programmes of social insurance, and other factors, national expenditures for health services have increased sharply in most of these countries. Thus, the problem of rising health care costs has generated a continual striving for greater efficiency, and greater prudence in the spending of health money.[2]

In all types of country, moreover, there are special attributes of health care systems (in contrast to several other sectors) that often lead to waste, and hence generate a search for greater efficiency. One such attribute is the predominant role of the health care provider - particularly the modern physician - rather than of the patient in making decisions on the health services to be rendered. These services, especially in hospitals, can be extremely costly, even though their benefits may be slight. Another attribute is the worldwide tendency for mounting expectations from medical science - associated strongly with higher educational levels - which enhance the general demands for health care. Increasing expenditures due to these various factors provoke a constant search for more efficient methods of using all health care resources, including manpower.[3]

For all these reasons, WHO Member States, in their dynamic interaction with the Organi zation, have developed over the years several strategies, the ultimate objective of which ha been to achieve greater efficiency in the use, and production, of health personnel. On must appreciate, of course, that this objective is not the same as seeking effectivenes (which would pertain, in a sense, to the goal of all health programmes). Effectivenes means the attainment of desired or good results, regardless of cost. Efficiency involve the relationship of results or outputs to their cost or input. An activity may have hig effectiveness and low efficiency, if it is much more expensive than it need be.

Thus, one can identify at least four major strategies in WHO health manpower policy whic imply - even if not so formulated - an objective of efficiency. To minimize repetition, w will analyse the development of each of these strategies separately. They involve: (a) th use of health auxiliaries; (b) the functioning of personnel in health teams; (c) streng thened training in health programme management, and (d) the training of teachers of healt personnel.

Use of health auxiliaries

In Chapter VII on the objective of population coverage, we have observed the central rol played by promotion of the training and use of various types of auxiliary health worker. This account need not be repeated here except to point out that the reasons for using healt auxiliaries were long recognized to involve efficiency as well as coverage. As early as 1951, in the first Technical Discussions at a World Health Assembly (which were devoted t the education and training of medical and public health personnel) much attention was give to the training and use of auxiliaries. The formulations, in fact, made no reference t population coverage as a reason for training health auxiliaries, but only to their functiona value in assisting fully qualified professional workers in the fields of medicine, nursing, midwifery, sanitary engineering, dentistry, and so on. In each of these disciplines, auxiliaries would perform some of the functions of the professional person. With respect to "assistants to registered doctors", it was stated, for example, that they:

> "... should be considered to be of the nature of temporary expedients. They should be replaced as soon as there are enough qualified professional persons to meet all needs".[4]

The implication was clearly that the use of auxiliaries would be a transient and inexpensive way of providing efficient or relevant health services, particularly in developing countries.

In 1960, when an expert committee advocated expanded training of auxiliaries because of the wastefulness of employing "highly trained personnel in work which auxiliaries are capable of performing",[5] it was basically advancing an argument for efficiency rather than coverage. (This rationale would be quite as applicable in a metropolitan hospital as in an isolated village health station.) Similarly, in 1967, the same expert committee offered further efficiency-related reasons for training auxiliaries in medicine when it stated:

> "Even in the more prosperous countries, with a relatively high physician/population ratio, the addition of medical assistants to the health team can free physicians, and thus make high-quality medical care more widely available... In very small communities, where it would be uneconomical to employ qualified physicians, medical assistants can do very useful work...
>
> Many diseases can be treated by health workers who have had a training simpler than that of fully qualified physicians".[6]

The same sort of reasoning, on the use of auxiliaries to attain greater efficiency in the provision of health services, has been evident in several other WHO programmes. For dental care, the advocacy of auxiliaries has been particularly prominent. In 1959, the expert committee on this subject stated:

> "It is recognized that even in the highly developed nations it is not possible to produce a sufficient number of fully qualified dentists to provide all the dental care that is needed. It is also recognized that a greater quantity of dental service can be rendered by the efficient utilization of auxiliary personnel and by use of the dental health team."[7]

raining programmes for operating dental auxiliaries were organized, with WHO cooperation, in everal developing countries, such as Jamaica, Papua New Guinea, Senegal, and Uganda.[8] As ecently as 1977, a study in the WHO European Region discussed the "possible need for more ental auxiliary personnel to effectively increase dental manpower to cope with the growing emand for dental care"[9] - with clear implication of the concept of efficiency:

> "There are many aspects of dental care that do not require the continuous personal involvement of dentists or their extensive, and therefore expensive, skills and knowledge."[9]

In nursing, the training and use of auxiliary personnel have long been advocated and implemented. In 1959, the Expert Committee on Nursing discussed public health nursing, and concluded that:

> "the auxiliary worker has an important and almost certainly permanent place in public health nursing. The potentials and limits of auxiliary functions and the relation of auxiliary to professional workers are immediate and urgent problems".[10]

Similarly in 1969, a seminar in the Caribbean area accepted the recommendation that:

> "There is a need for a second category of nurse, classified as nursing assistant, a member of the nursing team within the health services working under the supervision of the registered professional nurse or leader of the health team".[11]

In health programmes for the control of malaria, for the improvement of environmental sanitation, for the promotion of sound nutrition, for virtually every public health purpose, the value of briefly trained auxiliaries has essentially been accepted. The WHO Expert Committee on Leprosy, in 1966, for instance, devoted part of its report to the training of auxiliary personnel.[12]

Thus, the value of auxiliary personnel in various types of health programmes was long appreciated. Auxiliaries were trained and utilized for reasons of economy and efficiency in countries at all stages of development. When the issue of population coverage with health services became more prominent, as reviewed in Chapter VII, the efficiency argument did not disappear but was rather submerged by the emphasis on reaching total coverage or covering rural people with essential health care. The importance of proper supervision of health auxiliaries, nevertheless, has been stressed from the first days of WHO to the present time. Likewise, there has been mounting recognition of the value of having auxiliaries function along with other health personnel in coordinated teams.

Personnel coordination through health teams

In several of the contexts involving auxiliary personnel reviewed above, reference was made to health teams. A team (or a coordinated group of persons with complementary functions working towards a common end) has been repeatedly advocated because, among other things, it permits supervision of auxiliary personnel. But more important, teams are advocated because they facilitate the performance of functions by all personnel in the least wasteful or most efficient manner. The team concept is clearly related to an objective of efficiency in the functioning or management of personnel; teamwork is reasonable whether health services are being rendered in a rural or urban area or whether one is considering the most developed or the least developed country.

The importance of a team setting for the work of nurses, midwives, auxiliaries, and others was articulated in a World Health Assembly as early as 1950.[13] The Expert Committee on Professional and Technical Education of Medical and Auxiliary Personnel in 1955 dealt specifically with the training and use of auxiliary health workers. A major emphasis in the report of this meeting was on the necessity of supervision of auxiliaries by professional workers. At the same time, the report states:

> "It is important that from the beginning of a programme everyone (administrators, fully qualified professional officers, and auxiliaries themselves, as well as the general population) should understand that the auxiliary is an essential part of the team providing health services".[14]

Twelve years later, the focus of this expert committee was specifically on medical assistants, who were trained to assume limited responsibility for decisions on the diagnosis and treatment of patients. This was clearly a wider scope of functions than implied in the earlier discussions of the role of health auxiliaries; significantly, therefore, the committee advocated such a role only in an organized health service - stating:

> "A number of simple functions usually performed by physicians can be delegated to medical assistants, within an organized health service providing for supervision".[15]

Teams of health personnel, with varying and complementary backgrounds and functions, had, of course, been giving services in both developed and developing countries for many years. In the USSR, teams of physicians, nurses, feldshers and other health personnel had been providing services in health centres and polyclinics - as the normal pattern of health care delivery - since the 1920s.[16] In Kalutara, Ceylon (now Sri Lanka), a health centre staffed by a health team of personnel was established in 1926, furnishing a model for the subsequent provision of a range of preventively oriented services in that country.[17] In India, both the Bhore Report in 1947 and the Mudaliar Report in 1962 outlined the strategy for primary health centres to be staffed by teams with several types of health personnel.[18] In many countries of Africa, teams of medical assistants, nurses, midwives, assistant health visitors, and assistant health inspectors have been organized to staff health centres since the 1960s.[19] Even in private medical practice in the United States of America, group medical clinics have demonstrated teamwork for many decades, and "neighbourhood health centres" have been staffed with teams to serve urban slum populations since the early 1960s.[20]

The idea of coordinated health teams was certainly not new in the world, even at the time of WHO's birth. Among WHO-related projects, the team approach for both the training and use of health workers had been applied in the Public Health College at Gondar, Ethiopia since 1954. At Yaoundé, United Republic of Cameroon, the University Centre for Health Sciences (UCHS) was established in 1969 - with the specific objective of training health teams. As explained in a report on this impressive school:

> "Teaching programmes are aimed at training a wide range of health personnel at all levels. Unlike a traditional faculty of medicine, UCHS is training future medical practitioners (physicians), nurses and various categories of technicians - all these in the context of health teams. Students with different basic academic qualifications pursue courses organized for different types of health personnel, with certain common (or core) courses shared by all students. The emphasis is, however, not on sharing of courses or lectures in the same classroom but rather on participation by all students in practical team training exercises in the field."[21]

In official WHO policy, however, it was not until the Sixth General Programme of Work, (GPW6), for 1978-1983, adopted in 1976, that the goal of "efficient use of health personnel" was explicitly spelled out, along with "the promotion of collaborative teamwork by different types of health personnel of different educational levels".[22] Accordingly, from 1976 onwards, WHO discussions of health manpower development to provide total populations with primary health care put major stress on functional, integrated teams.[23] Such teams would operate not only in hospitals - as had long been customary - but also at the more peripheral level of the rural health centre and the local or village dispensary. In 1977, a meeting of regional experts on health manpower development in the WHO African Region formulated its goal in terms of "planning, establishing and organizing the work of health teams"[24], and recommended that:

> "The number and category of the staff to be included in the health team should be decided on the basis of tasks to be performed, taking into consideration demographic, economic, geographical and other related factors."[24]

In 1976, the Division of Health Manpower Development sponsored a thorough examination of the concept of health teams, their significance in different parts of total health systems, and their educational preparation. It was pointed out that "in order to optimize the training of health workers who will subsequently form a health team", it is essential to increase instruction in the group or team setting.[25] The premise of this argument is that health personnel who are, to some extent, trained together will later be better able to work cooperatively together. In several countries, such integrated training has been found to be

very effective with respect to several types of health personnel.[26] There is surely mounting agreement throughout the world about the benefits of teamwork in the functioning or utilization of health personnel, and coordinated training can help to prepare them for such cooperative work. If only because of the steadily increasing specialization of the health sciences, efficient use of health manpower - use which avoids wasteful performance of tasks by persons overtrained or undertrained for those tasks - requires their coordination in functional teams as much as possible.

Coordination of health personnel in teams cannot be achieved automatically, just by bringing differently trained health workers together. Effective teamwork requires common understanding of the role of each team member and skilful leadership. If one extends the concept of teamwork beyond the level of a small group of personnel, rendering direct personal health care, to a community or even a nation, with a vast array of skilled health workers performing scores or even hundreds of different functions, then still another requirement for efficiency is identified. This is a requirement for effective management of health personnel.

Management of health personnel and health programmes

As more has been learned about complex organizations and how they work, recognition has increased of the importance of effective management of health personnel. Management of the health services or of total health systems is, of course, a much larger subject, of which health personnel management is only a part. In the context of an objective of efficiency health manpower, we are concerned initially with the management of health personnel. Then, the perspective broadens to include management of health services.

In the early years of WHO, one cannot identify the formulation of any policies focused specifically on the prudent management of health manpower. Perhaps the closest that any activity in education and training came to addressing this issue was concern for postgraduate training in schools of public health. The purpose of such schools is, of course, broader than training in personnel management, but this may be regarded as one basic component of the discipline of public health administration or, more generally health administration. In the World Health Assemblies during Period II(1952-1961), a need for expansion of schools of public health was identified as the seventh-ranking problem - although it declined to sixteenth in rank during Period III (1962-1972), and disappeared after this.

In 1961, the Expert Committee on Professional and Technical Education of Medical and Auxiliary Personnel focused its attention on schools of public health. Among many recommendations, it stated in the tenth report that the curriculum of these schools should be constructed around five major subjects, of which the first was "public health administration: principles and practice".[27] Periodic conferences of schools of public health in Latin American countries, designed to promote an exchange of ideas on various aspects in the field, were started in 1959[28] and have been held periodically since then.

Travelling seminars (composed of deans of North American schools of public health) were made to postgraduate schools of public health in Europe, the Eastern Mediterranean Region, and Latin America in 1963, 1965, and 1967. In 1964, a symposium on European schools of public health was held in France, and in 1967 a similar meeting, concerned with schools in Asia and the Eastern Mediterranean and Western Pacific Regions, was held in the Philippines.[29] A comprehensive study was made of schools of public health in Europe in 1969.[30] These activities were all designed to strengthen this type of postgraduate instruction which includes, inter alia, training in the management of health personnel.

Perhaps more specifically oriented to personnel management is training in hospital administration, in so far as the proper operation of hospitals is heavily dependent on the effective management of personnel. An expert committee was devoted to a discussion of instruction in this subject in 1968.[31] Two levels of training were, in fact, recommended: (a) short courses for personnel concerned with special aspects of internal hospital management, and (b) longer courses for high-level hospital administrators concerned mainly with the relationships of hospitals to total health systems.

In the 1970s, discussions in WHO of postgraduate training in public health became more sharply focused on the "management" objective within such training. In the World Health Assemblies of Period III (1962-1972), the need for proper management of health personnel was

the fourteenth-ranking problem identified, and in Period IV (1973-1980) it was sixteenth in rank. An expert committee report on postgraduate education and training in public health, published in 1973, begins its concluding section with these words:

> "The expansion of health services, and their increasing costs in terms of material and human resources (i.e. health manpower), requires personnel with the competence to assess health needs, determine priorities, propose possible solutions, and implement the resulting decisions by planning and administering health programmes and services. For such functions it will be necessary to train not only personnel in the traditional health professions but also specialists in such fields as information science, economic and social planning and management."[32]

Among the subjects that this committee proposed for future discussions, the first was "public health training as related to manpower needs and development, with special reference to the less developed countries". In 1965, WHO also issued the first World Directory of Schools of Public Health; a second edition followed in 1972.[33]

In 1973, an important study was published by WHO, entitled Health Practice Research and Formalized Managerial Methods. In this publication the perspective of management is much broader than the mere management of health manpower; its concern is the entire operation of health service systems. The authors state:

> "Key posts in health administration cannot be adequately filled by persons without special training, however gifted they may be. The efficient operation of health services now demands not only an extensive knowledge of medicine and the biomedical sciences, but also a range of managerial and research skills that in-service experience cannot wholly provide. For this reason, formal training of some sort in management science ... is now recognized as a necessary part of the education of senior health personnel in all countries".[34]

This broader conception of training in the management of health programmes is reflected in various official documents of WHO in the later 1970s. Thus, in the important statement on health manpower development submitted by the Director-General to the Twenty-ninth World Health Assembly in 1976 there is a full discussion of health manpower systems which include the health manpower development process of planning, production, and management.[35] It is especially noteworthy that under the heading of "management (administration) of health personnel" there is a discussion not only of "proper management of health personnel" (career structure, moral and financial recognition, etc.) but also of:

> "development of learning opportunities for top and middle level health planners and managers, using existing facilities such as schools of public health, which should be encouraged to strengthen health planning and management and health practice research in their curricula ... and adapting them to present and foreseeable future national health needs".[35]

This conception of the relationship of health manpower management to the improvement of health services is expressed also in the 1976 World Health Assembly resolution (WHA29.72) which requests the Director-General:

> "to collaborate with Member States in the development and adaptation of effective health manpower management policies, in the establishment of a continuous evaluation process to ensure the necessary changes in a dynamic and integrated system of health services and manpower development ...".[36]

It is evident that these formulations of the idea of management relate not only to an objective of efficiency in the training and use of health manpower, but also to the efficient operation of health systems as a whole. The same concept is reflected in the medium-term programme for health manpower development that was prepared, pursuant to GPW6, in March 1978. This important document states, with respect to manpower planning and management, that WHO will collaborate with countries towards the achievement of targets that include:

> "Development of management training capability ... leading to an increase in the number of competent health service managers, and their utilization".[37]

As recently as October 1980, an organizational study of the WHO Executive Board was devoted to the role of WHO in training in public health and health programme management, including the use of country health programming. This study emphasizes the importance of management training for achieving the long-term goal of "Health for all by the year 2000". It goes so far as to state:

> "The Board is of the opinion that management training is one of the essential strategies possible for engaging and harnessing the national energies required to orient the health system in the direction needed to achieve health for all by the year 2000".[38]

Thus an objective that was formulated as effective management of health personnel - so that they would function more efficiently - became widened over the years an integral part of effective management of total health systems.

Training teachers to enhance student learning

On a quite different path towards an efficiency objective, there has been another set of strategies in the health manpower field - involving achievement of improved methods of teaching health personnel. Although these strategies evolved, in time, towards an objective of achieving "relevance to social needs" - extending well beyond the goal of efficient teaching - they started with a goal which was essentially one of improved medical pedagogy. In other words, teachers should be trained so that a given amount of their teaching effort would lead to a maximum amount of learning by the student.

In the early years of WHO, the Education and Training (ET) programme was so concentrated on increasing the number and output of health professional schools (particularly in medicine) that little attention was given to attaining improved or more efficient methods of education. It was only towards the end of Period II, in 1960, that explicit attention began to be given to the training of teachers so that they could teach more effectively, and this was only with respect to the teaching of basic sciences in medical schools. An expert committee spoke that year of "the lack of adequately trained teachers in the basic medical sciences and particularly ... in the less developed countries".[39] The committee suggested that "a scheme for the training of suitable teachers might be organized on an international basis".[39] Even this committee's report, however, only hinted slightly at the need for improved methods of medical instruction.

In Period III (1962-1972) among the problems identified at World Health Assembly interventions (as shown in Chapter III), the need for training of teachers and the need for regional training centres became specifically identified, although not at the highest level of priority (13th and 23rd in rank, respectively). In 1969, the ET Division prepared an important plan for a comprehensive WHO training programme for teachers of health personnel which, inter alia, called for training teachers in specific subjects and also in medical pedagogy.[40] Earlier teacher-training programmes had actually been organized in the Region of the Americas; they stressed the human relations between student and teacher. In 1965, this WHO Region even published a book on medical pedagogy for Latin American teachers.[41] The first regional teacher training course was held in the South-East Asia Region in 1969.

Towards the end of Period III, during the years 1969-1972, rapid progress was made by WHO in advancing the training of teachers, primarily in medical schools, on sound or efficient methods of education. As stated in an article in the WHO Chronicle in 1970:

> "Teachers in the medical sciences are rarely given the opportunity of studying educational methods and are generally appointed on the basis of their technical knowledge and experience ... An understanding of the principles of modern teaching methodology will help (him) to achieve a rapid improvement in (his) performance ... During the past few years, WHO has conducted or promoted an increasing number of courses and seminars on teaching methodology. These courses have provided much-needed instruction in educational practice to some of those involved directly in the teaching of medical and auxiliary staff in all six WHO regions".[42]

The Director-General, reporting in 1971 on WHO activities in connection with the Second United Nations Development Decade, stated:

> "In the health field, education and training programmes have been given the highest priority in this strategy, and emphasis has been placed on teacher training programmes, new approaches in devising curricula, the use of modern equipment, technical and vocational training and retraining ... and the establishment in developing countries of at least a minimum programme of health facilities comprising an infrastructure of training institutions".[43]

In 1972, the European Regional Office organized a seminar for medical teachers from 22 countries on the pedagogical aspects of medicine.[44] Also in 1972, "individual and small group learning systems in medical education" was the theme of a WHO study group meeting in Geneva. This meeting stressed "the training of teachers in educational methods and the use of all possible means of encouraging teachers to devote time to the preparation of learning material".[45]

The efficiency objective of all these initial activities in teacher-training was made quite explicit in the summary of a seminar held in Italy in April 1972:

> "All teachers in medical schools should receive proper training in pedagogy with the aim of increasing their competence in dealing with educational problems. Pedagogically trained staff would increase the efficiency of a medical faculty ...".[46]

As recently as 1974, the same theme was struck in another publication:

> "The importance of educational science in improving both the efficiency and the effectiveness of educational programmes for the health profession can no longer be seriously questioned. Through a variety of activities the World Health Organization has attempted to promote the incorporation of this new discipline into the programme planning and implementation of efforts of health professions schools".[47]

It was around 1973-1974, however, that the perspective of WHO teacher-training activities began to broaden from efficiency in the teaching/learning process towards greater concern for the orientation of medical teaching to community health problems and its adaptation to local needs. This broader view - discussed in a later chapter on the objective of relevance - began to appear in the 1973 report of a study group, in which the conclusion reminds one that:

> "In order to prepare the increasing number of students for the complex health care needs of the growing world population, there is an urgent demand for more and better teachers in all the health professions ... The ultimate purpose of the WHO sequential programme proposed in 1969 ... was to improve the delivery of health service".[48]

After 1975, as we shall see, the teacher-training programme became focused predominantly not on pedagogical methods as such, but on the organization of educational programmes in settings and with teaching methods designed to prepare personnel most suitably to meet the needs of each nation's health services.

References

1 Abel-Smith, B. & Leiserson, A. Poverty, development and health policy. Geneva, World Health Organization, 1978 (Public Health Papers No. 69).

2 Fuchs, V. Who shall live ? New York, Basic Books, 1974.

3 Abel-Smith, B. Value for money in health services : a comparative study. London, Heinemann, 1976

4 Technical discussions on the education and training of medical and public health personnel. WHO Chronicle, 5(11):p.303 (1951).

5 WHO Technical Report Series No. 212, 1961. (The use and training of auxiliary personnel in medicine, nursing, midwifery, and sanitation; ninth report of the Expert Committee on Professional and Technical Education of Medical and Auxiliary Personnel), p.6.

6 WHO Technical Report Series No. 385, 1968. (Training of medical assistants and similar personnel: seventeenth report of the WHO Expert Committee on Professional and Technical Education of Medical and Auxiliary Personnel), p.8.

7 WHO Technical Report Series No. 163, 1959. (Expert Committee on Auxiliary Dental Personnel), p.32.

8 Myers, S.E. Operating dental auxiliaries. WHO Chronicle, 26(11):511-515 (1972).

9 Allred, H. The training and use of dental auxiliary personnel: report on a study. Copenhagen, World Health Organization Regional Office for Europe, 1977, pp.1, 52.

10 WHO Technical Report Series No. 167, 1959 (Public health nursing: fourth report of the Expert Committee on Nursing), p.30.

11 Pan American Health Organization. Report on a seminar on the training and utilization of auxiliary nursing personnel, Roseau, Dominica, 12-23 May 1969. Washington, DC, 1969, p.44. (Reports on Nursing No. 13).

12 WHO Technical Report Series No. 319, 1966 (Expert Committee on Leprosy: third report).

13 WHO Official Records No. 28, 1950, p.204.

14 WHO Technical Report Series No. 109, 1956 (Expert Committee on Professional and Technical Education of Medical and Auxiliary Personnel: third report), p.17.

15 WHO Technical Report Series No. 385, 1968, op cit., p.14.

16 Sigerist, H.E. Socialized medicine in the Soviet Union. New York, Norton, 1938.

17 Wickremesinghe, W.G. The premier health unit in Ceylon. Colombo, 1951.

18 Takulia, H.S. et al. The health center doctor in India. Baltimore, Johns Hopkins University Press, 1967.

19 King, M., ed. Medical care in developing countries. Nairobi, Oxford University Press, 1966.

20 Roemer, M.I. Evaluation of community health centres. Geneva, World Health Organization, 1972, p.19. (Public Health Papers No. 48).

21 Monekosso, G.L. & Quenum, C.A.A. The University Centre for Health Sciences, Yaoundé, United Republic of Cameroon: training the health team. In: Katz, F.M. & Fülöp, T. Personnel for health care: case studies of educational programmes. Geneva, World Health Organization, 1978, p.195. (Public Health Papers No. 70).

22 WHO Official Records No. 233, 1976, pp.70-71.

23 Flahault, D. An integrated and functional team for primary health care. WHO Chronicle, 30(11):443-446 (1976).

24 World Health Organization Regional Office for Africa. Health manpower development: the problems of the health team; report of a WHO regional expert meeting on health manpower development. Brazzaville, 1977, pp.1,12. (AFRO Technical Report Series No. 4).

25 Vysohlid, J. Health teams development. Geneva, World Health Organization, 1976, p.8. (Unpublished document).

26 Katz, F.M., & Fülöp, T., ed. Personnel for health care: case studies of educational programmes, Volumes 1 and 2. Geneva, World Health Organization, 1978, 1980. (Public Health Papers No. 70 and 71).

27 WHO Technical Report Series No. 216, 1961 (Recommended requirements for schools of public health: tenth report of the Expert Committee on Professional and Technical Education of Medical and Auxiliary Personnel).

28 Organización Panamericana de la Salud. Conferencia sobre escuelas de salud pública (San Miguel Regla, Estado de Hidalgo, México, del 2 al 7 de noviembre de 1959). Washington, DC, 1960. (Publicación Científica, No. 49).

29 Grundy, F. Schools of public health. WHO Chronicle, 23(6): 251-255 (1969).

30 Cottrell, J.D., et al. The teaching of public health in Europe. Geneva, World Health Organization, 1969. (Monograph Series No. 58).

31 WHO Technical Report Series No. 395, 1968 (Hospital administration: report of a WHO Expert Committee).

32 WHO Technical Report Series No. 533, 1973 (Postgraduate education and training in public health: report of a WHO Expert Committee), p.29.

33 World Health Organization. World directory of schools of public health 1971. Geneva, 1972.

34 Grundy, F. & Reinke, W.A. Health practice research and formalized managerial methods. Geneva, World Health Organization, 1973, p.165. (Public Health Papers No. 51).

35 World Health Organization. Health manpower development. Geneva, 1976, p.30, (Unpublished document A29/15).

36 WHO Handbook of resolutions and decisions, Volume II, 4th ed., 1981, p.124.

37 World Health Organization. Medium-term programme for health manpower development: report by the Director-General. Geneva, 1978, p.8. (Unpublished document A31/18).

38 World Health Organization. Organizational study on the role of WHO in training in public health and health programme management, including the use of country health programming; Report of the Executive Board Working Group. Geneva, 1980, p.12. (Unpublished document EB67/22).

39 WHO Technical Report Series No. 209, 1961 (The teaching of the basic medical sciences in the light of modern medicine: eighth report of the Expert Committee on Professional and Technical Education of Medical and Auxiliary Personnel), pp.6-7.

40 Fülöp, T. Development of a comprehensive WHO training programme for health personnel teachers. Geneva, World Health Organization, 1969. (Unpublished document PGE/69.2).

41 Bridge, E. Pedagogía médica. Washington, DC, Pan American Health Organization, 1965.

42 Modern teaching methodology in the trainaing of the health team. WHO Chronicle, 24(10):476 (1970).

3 WHO Official Records No. 193, 1971, p.89.

4 World Health Organization Regional Office for Europe. The training of medical teachers in pedagogy: report of a seminar. Copenhagen, 1972. (Unpublished document EURO 6002).

5 WHO Technical Report Series No. 489, 1972 (Implications of individual and small group learning systems in medical education: report of a WHO Study Group), p.28.

6 Thomsen, O.B. "Training of medical teachers in pedagogy". WHO Chronicle, 27(1):8 (1973).

7 Miller, G.E. & Fülöp, T. Educational strategies for the health professions. Geneva, 1974, p.7. (Public Health Papers No. 61).

8 WHO Technical Report Series No. 521, 1973 (Training and preparation of teachers for schools of medicine and of the allied health sciences: report of a WHO Study Group), p.21.

Chapter IX

PLANNING OBJECTIVE : PREPARING FOR FUTURE REQUIREMENTS

The systematic planning of health manpower is an essential component of general health lanning - which, in turn, must be recognized as a part of overall socioeconomic planning. t has been defined in a WHO publication as:

> "... organizing, in systematic fashion, the goals, objectives, priorities, and activities of manpower development in order to ensure that the right number of staff with the appropriate skills are provided at the right time to meet the requirements of the work to be done".[1]

Even more specifically, health manpower planning is:

> "...the process of estimating the number of persons and the kind of knowledge, skills, and attitudes they need to achieve predetermined health targets and ultimately health status objectives."[2]

Reasonable and obvious though such an approach to health manpower development in any country may seem, it is noteworthy that nearly two decades passed following the birth of WHO before deliberate attention was given to national health planning in general or to health manpower planning in particular.

Background factors

By the nineteenth century, as industrialization developed, millions of people found themselves living in miserable urban slums. There were 12-16 hour working days and child labour; communicable diseases and malnutrition were rampant; infant mortality was high; and life expectancy in the working class was short. As political movements arose in Europe to counteract these anomalies, ameliorative social actions were taken, such as social security programmes, protective labour legislation, free public education, and so on.

Beyond the compensatory social welfare measures, some countries enacted anti-monopoly laws to limit to some degree the abuses of free market dynamics. It was not until the Russian Revolution of 1917, however, that fundamental actions were taken in any country to move beyond social reforms and depart entirely from the free-market ideology, replacing it with systematic socioeconomic planning. After the October Revolution, it was some years before the new Union of Socialist Soviet Republics became stabilized, but in 1926 the USSR launched its first five-year plan, setting goals and time-tables for the development of every sector of society, including the health services.

In the other industrialized countries, post-war planning began to be undertaken during the Second World War, to help assure more equitable distribution of resources after the war than had been achieved under free market conditions before the war. In the health sector, this was demonstrated in a worldwide extension of social security for supporting medical care in the decade after the war ended (1945-1955). It was also shown in the organization of offices of general economic planning to accelerate development in many of the newly independent nations of Asia and Africa.

In WHO, however, it will be recalled that shortly after the Organization's birth, the USSR and other socialist countries - under the conditions of the "cold war" in the 1950s - withdrew from active membership. Hence the Member States that had acquired the greatest experience with economic and national health planning were absent from WHO for several years during the time span defined in this study as Periods I and II. Moreover, in these early years of independence of former colonies, concerns with basic economic development - not to mention achieving political stability - were so overwhelming that little attention could be paid to planning in a field, such as health services, usually regarded as marginal by economists and political leaders. These background factors may help to explain the virtual absence of explicit attention in WHO in general to health planning and specifically to health manpower planning during Periods I and II.

Health planning - Periods I and II

In the WHO Constitution, drafted in 1946 and adopted in 1948, one searches in vain for the word "plan" or "planning". Among the 22 specific functions of the Organization spelled out in Article 2, many phrases may imply planning - "to stimulate and advance work to ..." "to promote improved standards of ...", "to take all necessary action to ...", and so on. Even in outlining the operational procedures for the Assembly and Executive Board, the Constitution requires the board to submit "a general programme of work covering a specific period", - which means essentially a plan. With the perspective of history, one gets the impression that the framers of the WHO Constitution were rather assiduously avoiding any reference to plans or planning in this important document.

It should not be surprising, then, that in Period I (1948-1951) one finds no explicit reference to health planning or manpower planning in any of the records of WHO governing bodies or in other WHO technical documents or reports. One may infer an implication about planning at the fifth session of the Executive Board in 1950, where one member spoke of the need for regionalization,[3] but planning, as such, was not mentioned.

In Period II (1952-1961), among the interventions identifying problems at the World Health Assemblies, no mention was made of any need for planning. The massive problems of disease, malnutrition, high infant mortality, etc. were, of course, described repeatedly at meetings and in official documents. Nevertheless, in Period II, one may infer only the faintest recognition of the concept of planning on certain occasions. In the Technical Discussions at the Fourth World Health Assembly in 1951, for example, reference was made to a need to determine the number of medical students who should become trained.[4] In 1953, the Executive Board organizational study on education and training comes a bit closer to the concept of planning (though not using the word) by giving its judgement that the first objective of the E1 programme should be "to determine world needs by regions and by countries for trained personnel in the various branches of health and medicine".[5] This constituted an approximate statement of the importance of a quantification of needs, as a basis for action - this being a central tenet in current concepts of health planning.

In certain publications in the WHO Technical Reports Series during Period II, one may also find indirect implications of a planning objective. A policy statement on the training of statistical personnel in 1954, for example, indicated that the emphasis by WHO is "on the applied side of statistics"[6] - an approach which might be interpreted to mean that statistics would be expected to serve as a tool for planning. The Expert Committee on Environmental Sanitation, reporting in 1952, made a reference to planning in this sector of the health services when it stated:

> "In the preparation of a programme of environmental sanitation the first need is for a careful assessment of the problem and for overall planning of the necessary measures at the highest level".[7]

The Technical Discussions at the Ninth World Health Assembly, in 1956, were devoted to "Nurses: their education and their role in health programmes". Among the conclusions was a statement that one of the usual functions of a chief nursing officer in a national health agency should be participating in planning the national health programme - making the rather sweeping assumption that such planning was being undertaken.[8] At the end of Period II, a study of basic nursing education, published in 1961, made perhaps the first explicit reference to planning educational programmes - in offering:

> "suggestions as to a method of planning, and it is intended for the use of nurses who find themselves in a position to influence planning for basic nursing education at local, intermediate (state or provincial), or national levels, particularly in countries where the practice of modern nursing and preparation for it are just beginning to develop".[9]

Only in very limited ways does one find in Periods I and II any direct or indirect references to health planning. Where the context is broad or comprehensive planning, the references are very indirect; where the references to planning are explicit, the context is a subdivision of the health sector, such as environmental sanitation or nursing. Clear-cut acknowledgement of a planning objective in overall health services or in health manpower development is quite lacking prior to 1962.

In the opinion of some observers, this situation reflected the view that WHO, at its eginning, was mainly a body for "international sanitary quarantine", complementing the olonial health services - past or present.[10, 11] An interpretation of attitudes of the nited States of America - a major force in WHO during these years - towards international id programmes in the 1950s, is given by a US scholar writing in 1957:

> "The three original aims of the Point Four Program reflected considerable U.S. activity in developing policies to counter Soviet power. They were: to prevent underdeveloped countries from falling under Communist domination and to assure their good will toward the U.S.; to maintain and develop these countries as sources of strategic raw materials; and to develop to the extent possible future markets for U.S. commerce. In addition, humanitarian aspects were included among the considerations behind the Point Four Program".[12]

n Period III, considerable change was to occur in attitudes towards health planning around he world and in WHO.

lational health planning - Period III

The first specific reference to national health planning in a WHO publication was an expert committee report that appeared in 1967.[13] In World Health Assemblies, the first specific reference to health manpower planning was made in a resolution in 1969, related to the Second United Nations Development Decade (WHA22.55), which stated that global priorities in health should include:

> "the planning, organization and operation of systems and institutions through which the health service personnel can provide to populations they serve every form of care ... particularly ... for the largest possible segment of the population in developing countries".[14]

In 1969 also, the Expert Committee on Maternal and Child Health stated in its conclusions:

> "Planning is necessary to develop, organize, and distribute services to cover the population. This calls for careful assessment of the local problems and of the approaches and resources at hand. Advisory bodies to coordinate the interests of all groups concerned with mothers and children are also desirable".[15]

With respect to perception of problems on the planning of health manpower, as reflected in interventions at the World Health Assemblies, these did not appear until the later years of Period III. Hence, as indicated in Chapter III, the need for health manpower planning was identified, but counting all eleven World Health Assemblies in this period, it ranked low - 22nd out of 23 significant problems. There were, in fact, two aspects of planning as related to health manpower: (a) the planning of health personnel of all types, and (b) the training of skilled health planning personnel.

The first aspect - that is, planning for health manpower as a whole - was identified in the conclusions of the Technical Discussions at the Twenty-third World Health Assembly in 1970. Among the conclusions of these Technical Discussions, one was the need for:

> "health manpower planning ... based on an analysis of health problems as well as the functions required for the achievement of desired and feasible objectives".[16]

Also in 1970, at the forty-seventh meeting of the Executive Board, the first attempt to define general principles of health manpower development (including planning) was made by the member designated by the USSR. He listed these principles as:

- the training of national health personnel should be a part of the development plan of each country,
- training should be geared to the country's needs,
- training should be community oriented,
- rational use should be made of the personnel available.[17]

Further points were added at this Executive Board discussion on the training of auxiliaries, coordination between training and utilization of personnel, etc.

The second, more restricted aspect - namely that of the training of health planning personnel - was the special focus of an expert committee meeting whose report was also published in 1970. This meeting reviewed several travelling seminars that had been conducted on health planning in different regions during the years 1967-1969, and concluded that more work was necessary to reach clear decisions on the best way to train health planners. The committee concluded:

> "A full-scale apparatus for the training of health planners has been developed in relatively few countries... Thus, one of the imperatives in the current situation is the negotiation of a coherent plan of action to develop a systematic and effective training apparatus ... Further, in most countries training in health planning will have to be administered for some time on a relatively centralized basis, in view of the experience of several developed nations that a significant cadre of planners and teachers must be built-up before training responsibilities can be decentralized throughout the country to good effect."[18]

By 1971, recognition of the great importance of national health planning, and of health manpower planning in particular (including the formal training of health planners), had reached a high pitch in WHO. The World Health Assembly that year adopted a sweeping resolution (WHA24.59) on the training of national health personnel with at least eight major recommendations, the first of which stressed the importance:

> "firstly, of current and long-term planning of the training of national health personnel in accordance with each country's objective needs and existing social and economic resources".[19]

Also in 1971, WHO published the comprehensive findings and recommendations of a Scientific Group on the Development of Studies in Health Manpower, the main focus of which was on the crucial importance of health manpower planning. In its first conclusion the Scientific Group expressed:

> "considerable concern at the fact that the importance of health manpower planning is not widely understood. In particular, the potential benefits from the new techniques of study have not been fully appreciated. This has resulted in a probably widespread under-utilization of skills in the developed countries and unnecessary deficiencies elsewhere, in a frequent discrepancy between real needs for health manpower skills and the content of training programmes ...".[20]

By the end of Period III, the stage was well set for manpower planning to become an objective of very high priority in WHO's health manpower development programme. In previous years, under the umbrella of other concerns - such as population coverage, efficiency, or even the quantity objective - the planning of health manpower had been an implicit objective. But now it was an explicit and prominent part of WHO's policy - recognized, furthermore, as a major component in the task of planning total national health systems, within the framework of overall national socioeconomic development. It is surely no accident that it was in 1971 - after nearly 50 years of health planning experience in the USSR - that WHO published its first comprehensive account on Principles of health planning in the USSR.[21]

Health manpower planning - Period IV

The prominent place that national health planning, and health manpower planning in particular, had come to occupy in the and policies of WHO was not necessarily reflected in the perceptions of Member States. Among the problems identified at the World Health Assemblies of Period IV (1973-1980), the need for health manpower planning ranked only 15th in the number of interventions.

Member States apparently did not respond with great enthusiasm to the planning concept, with its strong emphasis on quantified assessment of needs and quantified projections of resources to be produced. Because of this, and perhaps for other reasons (see below), it appears that in Period IV the content of the health manpower planning concept was broadened. Certain planning activities, of course, continued as before, such as the Pan American Conference on Health Manpower Planning held in 1974.[22] Major emphasis in that conference was put on the training of planners and other personnel connected with planning

d on research concerning planning methodologies. These were significant emphases, since e Pan American Health Organization had, from the early 1960s, made a great investment in aining health planners by the PAHO-CENDES method, as it was called - with disappointing sults.[23] The method called for careful quantification of each country's disease oblems according to their magnitude, importance, and vulnerability; then alternative tions were to be prepared by health planners for decision by policy-makers. Although some 00 persons were trained in this method, it was never successfully applied in any country of e Americas or elsewhere. The statistical information required for the analyses of disease rdens was seldom available; even when various options were posed to policymakers, final cisions were usually made on wholly different grounds.

As a result of experiences of this type, in 1976 WHO staff with major responsibilities or health manpower planning were led to conclude:

> "What are the lessons to be learned from experience with manpower planning? Such planning is now more concerned with the actual decision-making process and implementation of decisions than with the manipulation of numbers in forecasting demand and supply ... Planning efforts are unlikely to be effective if due account is not taken of the social, economic, and - most important - the political milieu in which they take place".[24]

n a word, the health manpower planning process came to be recognized in WHO, as it was in ountries, as being more political and social than mathematical. It was realized that uantitative analyses had their value, but that the ultimate decisions on implementation were eing made by national leaders who had to take into account problems and capabilities in the hole of society and political interests and considerations - not solely in the health sector r in health manpower. Similar insights affected the overall operation of WHO during Period V, when the organizational unit on national health planning was eliminated, and replaced by unit with much more broadly conceived functions and strategies; it was called "Country ealth Programming".

These insights may explain why in the Sixth General Programme of Work (GPW6, 1978- 1983), prepared in 1976, the section on health manpower development makes ample reference to planning as being an integral part of the total health manpower development process. The first detailed objective under health manpower development in GPW6 is:

> "To promote the planning for and training of the various types of health personnel composing 'health teams', with the proper knowledge, skills and attitudes for the execution of national health plans and programmes, including personnel with appropriate levels of skills for the provision of primary health care, as well as environmental health personnel".[25]

Similarly in the WHO Medium-Term Programme for Health Manpower Development - submitted to and approved by the Thirty-first World Health Assembly in 1978, health manpower planning appears in a subdivision of one of three programme areas. The planning objective is presented as one among five targets under Programme Area A, with the words:

> "Development of health manpower planning capability, as evidenced by an increased number of countries developing soundly based national health planning, including the prediction of manpower requirements".[26]

Thus in Period IV, health manpower planning did remain one of the main objectives of the HMD programme and was recognized as one component of a more broadly defined health manpower development process. This was already evident in the document issued preparatory to the 1976 deliberations of the Twenty-ninth World Health Assembly, which promulgated GPW6. In this important document (A29/15), the health manpower development process is analysed as consisting of:

> "(a) health manpower planning
> (b) manpower resources development (health manpower "production", education and training), and
> (c) health manpower management (administration)."[27]

Furthermore, the relationship of health manpower planning to overall health planning is stressed in the 1976 World Health Assembly resolution (WHA29.72) which requested the Director-General to:

"collaborate with Member States in strengthening health manpower planning as an integra part of overall health planning in the context of their socioeconomic conditions".[28]

In 1978, WHO published a comprehensive monograph entitled Health Manpower Planning, whic had been in gestation for several years.[29] In the summary of the chapter giving a overview, the broadened objective into which health manpower planning had evolved is wel stated as follows:

"Health manpower planning is a process whereby health manpower development goals objectives, priorities, and activities are established systematically in order to ensur that current and future health manpower resources meet adequately the requirements fo delivering health services to a population. It consists not merely in projecting th numbers of personnel required but also in planning to provide properly designed healt services with the quality and quantity of the personnel they need".[30]

References

Hornby, P., et al. Trends in planning for health manpower. WHO Chronicle, 30(11): 447-454 (1976).

Hall, T.L., & Mejia, A. Health manpower planning: principles, methods, issues. Geneva, World Health Organization, 1978.

WHO Official Records, No. 25, 1950, p.33.

WHO Official Records, No. 35, 1952, pp.184-189.

WHO Official Records, No. 46, 1953, p.131.

Training of statistical personnel: role of the World Health Organization. Bulletin of the World Health Organization, 11(1-2): 255 (1954).

WHO Technical Report Series, No. 47, 1952 (Expert Committee on Environmental Sanitation: second report), p.20

Nurses: their education and their role in health programmes; report of the Technical Discussions at the Ninth World Health Assembly. WHO Chronicle, 10(7): 212 (1956).

Lyman, K. Basic nursing education programmes: a guide to their planning. Geneva, World Health Organization, 1961, p.7 (Public Health Papers No. 7).

Sčepin, O.P. The problems of public health in developing countries. Moscow, Medicina, 1976.

Venediktov, D.D. International problems of public health. Moscow, Medicina, 1977.

Best, F.M. International law standards in the United States foreign aid treaties, 1948-1952, Washington, DC, Catholic University, 1957 (Master's dissertation).

WHO Technical Report Series, No. 350, 1967 (National health planning in developing countries: report of a WHO Expert Committee).

WHO Handbook of resolutions and decisions, Volume I, 1948-1972, 1973, p.511.

WHO Technical Report Series, No. 428, 1969 (The organization and administration of maternal and child health services: fifth report of the WHO Expert Committee on Maternal and Child Health), p.34.

WHO Official Records, No. 85, 1970, p.237.

World Health Organization. Executive Board Forty-seventh Session; Summary Records. Geneva, 1971 (Unpublished document EB47/SR/13 Rev.1).

WHO Technical Report Series, No. 456, 1970 (Training in national health planning: report of a WHO Expert Committee), p.33.

WHO Handbook of resolutions and decisions, Volume I, 1948-1972, 1973. p.50.

WHO Technical Report Series No. 481, 1971 (The development of studies in health manpower: report of a WHO Scientific Group), pp.46-47.

Popov, G.A. Principles of health planning in the USSR. Geneva, World Health Organization, 1971 (Public Health Papers No. 43).

Pan American Health Organization. First Pan American Conference on Health Manpower Planning, Ottawa, Canada, 10-14 September 1973. Washington, DC, 1974 (Scientific Publication No. 279).

23 Roemer, M.I. Comparative national policies on health care. New York, Marcel Dekke 1977, pp.199-200.

24 Hornby, P., et al. op. cit., pp.453-454.

25 WHO Official Records, No. 233, 1976, p.102.

26 World Health Organization. Medium-term programme on health manpower development - repo by the Director-General. Geneva, 1978, p.7 (Unpublished document A31/18).

27 World Health Organization. Health manpower development. Geneva, 1976, p.22 (Unpublish document A29/15).

28 WHO Handbook of resolutions and decisions, Volume II, 4th ed., 1981, p.124.

31 Hall, T.L., & Mejía, A. op. cit.

32 Mejía, A., & Fülöp, T. Health manpower planning: an overview. In: Hall, T.L. & Mejí A. op. cit., p.29.

Chapter X

RELEVANCE OBJECTIVE : TRAINING APPROPRIATE TO LOCAL HEALTH NEEDS

Most of the objectives of the health manpower development programmes discussed in revious chapters have implied also an objective of relevance - that is, that personnel hould be trained in numbers, types, and manners appropriate to the varying needs of each ountry. As experience with conventional concepts of education and training has accumuated, however, the crucial importance of designing educational programmes relevant to the articular conditions of each country has become increasingly appreciated - so much so that elevance has taken shape as a definable objective in itself.

eaning and background of educational relevance

From the first years of WHO, there were some representatives of Member States who recogized the importance of having health personnel receive an education that was relevant to the roblems and conditions of their own countries - even though the issue may not have been xpressed in this way. At the Second World Health Assembly, a delegate of India spoke of he importance of strengthening the educational institutions within each country, so that the bulk of national health staff may receive proper training in their own environment and under heir peculiar local conditions".[1] At the Third World Health Assembly, an Egyptian elegate remarked that "graduates returning from abroad had very little idea of local iseases or problems", and a spokesman from Pakistan stated: "it should be left to national uthorities to train their own workers".[2] In the first Proposed Programme and Budget Estimates submitted to the World Health Assembly, in 1949, a similar idea was expressed in the comment that "a physician should, in principle, receive most of his training in his country, or at least in a country similar to his own".[3]

In subsequent years, the issue of educational irrelevance and the formulation of strategies to achieve relevance were given more specific form. Many of these strategies have been discussed in previous chapters. The expanded training and use of health auxiliaries and the involvement of practitioners of traditional medicine, discussed in connexion with the objective of coverage, constituted one basic strategy that often implied a goal of relevance. The advocacy of health teams, as a mechanism for increasing efficiency, was another. The whole movement for advancing health planning was still another strategy closely connected with the goal of relevance; planning, in other words, was intended to result in meeting the current and future needs, not of some abstract realm, but of a particular country.

Still other activities in countries and in the work of WHO that have contributed to the objective of relevance can be identified. Some of these, such as strengthening training in preventive and social medicine, appeared early in the history of WHO, and then declined in importance. Other concepts, such as promoting the education of all medical and allied health personnel along more community-oriented (as distinguished from pathology-oriented or hospital-oriented) lines, arose in an amorphous form and then became more sharply defined in later years.

The background factors contributing to the ultimate formulation of relevance as a distinct policy objective included many of the general developments in medical science and in society already noted in other connexions. The rising proportion of developing countries among WHO Member States was basic. The increasing specialization of medicine and the proliferation of sophisticated technology in the affluent industrialized countries - rendering their health services less and less appropriate even to their own national health needs - accentuated the demands for relevance in WHO health manpower policy. The failure of major disease-control campaigns (especially malaria eradication) and disappointment with the wave of neo-colonialism also in the health field as well as with the entire role of private medical practice also contributed. Finally, the large persistent problems of disease and of resource deficiencies in the developing countries, combined with the problems of underserved urban slums and rural areas, even in industrialized countries, led in the most recent decade

to a growing sense of dissatisfaction with the so-called "Establishment" in modern medici throughout the world. All these circumstances led to a call for health care systems as whole, and health manpower policies within them, to become more relevant to the main healt problems of people everywhere.

Beyond the subjects implying an objective of relevance already discussed, this chapte will examine four further programmes or sets of activities promoted by WHO, to attain th objective of making health manpower policy more relevant to the needs of populations. Thes are: strengthening preventive and social medicine in medical and other health personne schools, medical education on salient or timely problems (such as mental illness or radiatio hazards); training teachers of health personnel to use more appropriate methods of educa tion; and designing the whole operation of medical and other health-related schools to tur out more community-oriented health personnel.

Strengthening education in preventive and social medicine

The earliest form of advocacy of a specific activity, to heighten the relevance of healt professional education to the health needs of people was to call for stronger emphasis o preventive and social concepts in medical education. Some comments along these lines wer even made in the deliberations of the Interim Commission for WHO in 1946. In the firs World Health Assembly, prominent public health leaders, such as Mudaliar of India, Parisot o France, and Stampar of Yugoslavia, spoke on this subject. From the Fifth World Healt Assembly (1952) onward, every single Assembly in Period II (1952-1961) heard some referenc to the subject. In the interventions at all ten of these Health Assemblies, the need fo teaching preventive and social medicine (PSM) was the fifth ranking problem.[4]

The Expert Committee on Professional and Technical Education of Medical and Auxiliary Personnel devoted a part of its second report in 1953 to PSM teaching in medical schools. An account of the report of this meeting stated:

> "The objective of teaching in preventive and social medicine is to give the student an adequate scientific background to the problems of health in the individual, family, group, and community ... He should be encouraged to integrate preventive and curative attitudes in his medical thinking and in his practice ...".[5]

This Committee emphasized that, more important than PSM instruction in separate courses, these concepts should be integrated throughout clinical teaching[6] - an approach still widely advocated today and all too seldom implemented.

Much emphasis was given in the WHO Region for the Americas to PSM teaching, formulated usually as the teaching of "preventive medicine and public health". Several issues of the Boletin de la Oficina Sanitaria Panamericana in 1955 published articles on this subject.[7] Numerous seminars on PSM teaching were held for medical school faculty members in the Region.[8] In 1957, the WHO Regional Office for Europe published a survey of the teaching of public health and hygiene in the medical schools throughout Europe.[9] Similar PSM emphasis was promoted in the basic education of dentists.[10]

The WHO policy of encouraging the incorporation of preventive concepts into various medical courses was well illustrated by the subject of the meeting of the expert committee dealing with education and training in 1957: it was focused on instilling preventive concepts into the teaching of pathology, specifically through promoting collaboration between pathologists and epidemiologists.[11] Inculcating a preventive viewpoint was promoted also during Period II in the continuing education of general medical practitioners.[12]

In Period III (1962-1972) the WHO strategy of instilling preventive concepts into the teaching and practice of various specialties of medicine, as well as in general practice, continued. The issue still appeared fairly prominently in the interventions at Health Assemblies, ranking eighth among 23 significant problems identified during this period. In 1963, the Expert Committee on Maternal and Child Health devoted its fourth meeting to methods of including PSM concepts in the training of both obstetrician-gynaecologists and paediatricians.[13] The Expert Committee on Nutrition and Infection, reporting in 1965, made a plea for the relevance of this subject in the education of all health personnel, when it advocated that:

"The interaction between malnutrition and infection should be regularly taught in schools of medicine and public health or hygiene, in schools for nurses and auxiliary health workers, and in short-term and refresher courses for public health personnel. It should also form part of the content of health education for the public. WHO should promote such education and training activities".[14]

n 1964, once again the expert committee concerned with education and training gave its ttention to stressing the relevance of preventive concepts "to every specialty of medical ractice, and particularly to the work of the [general] medical practitioner".[15] In 1966, his expert committee spoke of the value of involving the medical faculty in health care rogrammes for university students as a special way of teaching preventive medicine to edical undergraduates.[16]

By the end of Period III, however, the theme of stressing PSM concepts in the education f physicians and other health personnel seems to have played itself out in WHO strategies. n the Technical Discussions at the Twenty-third World Health Assembly in 1970, the teaching f preventive and social medicine is not specified at all among the 13 conclusions summa- izing the discussions. One gets the impression that the original focus on preventive edicine was broadening into an advocacy of education more generally oriented to local ommunity problems. Thus the Joint Committee on Health Policy of WHO and UNICEF, in its 1971 statement on the ET programme, lists five priorities, but PSM teaching is not among hem.[17] Likewise, in the last programme and budget statement in Period III, seven policies are listed - including community-based education and training - but not preventive and social medicine as such.[18] The comprehensive Assembly resolution on the ET programme (WHA24.59), adopted in 1971, called for implementation of many principles, but again PSM teaching, as such, is not specified.[19]

In Period IV (1973-1980), among 22 significant problems identified in Health Assembly interventions, the need for teaching preventive and social medicine is no longer included. In its place is the problem defined as the need for community-oriented curricula. Con- ferences on PSM-related subjects were held such as the 1978 meeting in Pakistan on teaching statistics to medical students,[20] - but preventive medicine instruction had evidently become absorbed into a broader concept of "relevance" in the overall training of all health personnel.

Medical education on other salient problems

Aside from the emphasis on PSM, WHO has identified and recommended over the years other subjects to strengthen medical education if physicians (and others) were to be trained more relevantly to the real problems in society.

This was illustrated by the subject chosen for review in 1957 by the expert committee in the ET field: postgraduate instruction of public health personnel on the public health aspects of nuclear energy. The report of this meeting spoke of the responsibilities of public health officials for radiation safety in hospitals, at workplaces and elsewhere - hence, the need for special courses on these problems.[21] Two months later the expert committee dealt with the instruction of undergraduate medical students in radiation medicine. This was a period, as stated by the Director-General in opening the second meeting, of "increasing world-wide interest in the widening applications of atomic energy".[22] There was much discussion everywhere of the possible hazards to populations that might result from fallout in the atmosphere following nuclear bomb testing. (The nuclear testban treaty barring such test explosions above the ground was not concluded by the United Kingdom, the USA, and the USSR until 1963.) This whole issue was probably exagge- rated and might have had relatively little relevance to real problems in the developing world, but at least it led to a fresh appreciation of the possible hazards of ordinary diagnostic X-ray exposure. Responding to these problems, the expert committee recommended appropriate instruction of both public health officials and medical students on the conse- quences and methods of control of harmful radiation.

In an even more direct response to the issue of radiation hazards, WHO set up a special Expert Committee on Radiation, which had its first meeting in 1958. This Committee met almost annually for the next several years. At its fifth meeting in 1964 it discussed the training of radiological staff, stressing that these personnel "should be conversant with

radiological protection, especially those aspects of it that concern the reduction of dose t the patient, as well as those that relate to the protection of the operator and others nea the radiation source".[23] The ET programme gave no subsequent consideration to thi special problem.

Another salient problem, on which special educational efforts were recommended, was th broad one of mental disorder, or the promotion of mental health. From its earliest years WHO had maintained a programme in mental health; the Expert Committee on Mental Health hel its first session in 1949. The meeting of this committee held in 1960 was devoted to th undergraduate teaching of psychiatry and mental health promotion.[24] The special focus o this discussion was the training, not of specialists in psychiatry, but of the majority o physicians - particularly general practitioners - who would see in their practices many patients with mental and emotional problems. Then, at its meetings in 1961 and 1963, the Expert Committee on Mental Health again discussed the educational aspects of this subject. The 1961 meeting was devoted to postgraduate education of both public health officers and general practitioners on problems of mental illness and mental health.[25] The 1963 meeting also discussed the education of specialists in various branches of medicine concerning the development of a psychosomatic approach in their work.[26]

Specific problems related to mental health have also been the subject of WHO meetings or studies which, inter alia, have recommended training programmes. The subjects covered have included the prevention and treatment of dependence on alcohol and other drugs (the subject of the meeting of the Expert Committee on Mental Health in 1967[27]) and human sexuality. Teaching health professionals about the latter subject was the focus of a research paper in 1974[28] and of a special meeting in 1975.[29]

Another problem of worldwide importance, for which WHO recommended special education and training as recently as 1977, in Period IV, was the health needs of adolescents. An expert committee report on this subject concluded that:

> "Health personnel should be trained to collaborate more efficiently with workers from other sectors such as education, the social services, and industry in meeting adolescent health needs".[30]

The rising problems in the 1970s of drug abuse, unwanted pregnancies, and venereal diseases among the adolescents of many countries obviously meant that education on the health care of this age-group was distinctly relevant to the needs of populations of those countries.

A striking reflection of the recognition given to the objective of relevance throughout the Organization in Period IV was the subject of the 1975 meeting of the Expert Committee on Mental Health. This meeting was devoted to the organization of mental health services in developing countries. Apropos of training, this report concluded:

> "In the developing countries, trained mental health professionals are very scarce indeed - often they number less than one per million of the population. Clearly, if basic mental health care is to be brought within reach of the mass of the population, this will have to be done by nonspecialized health workers - at all levels, from the primary health worker to the nurse or doctor - working in collaboration with, and supported by, more specialized personnel. This will require changes in the roles and training of both general health workers and mental health professionals".[31]

Thus, promoting health personnel training that is relevant to special health problems that became prominent in certain periods - radiation hazards, mental disorders, drug abuse, or the problems of adolescence - has contributed to attaining an objective of relevance in health manpower development.

Teacher training for relevant learning

In the discussion of WHO training activities oriented towards an objective of efficiency (Chapter VIII), the global and regional programmes designed to improve methods of health personnel education were reviewed. We have seen how, starting in the early 1960s, these efforts were directed initially towards developing more effective techniques of medical pedagogy, and then how they evolved around 1973-1974 towards the development of curriculum

ontent and teaching methods more adapted to local needs - hence, more relevant to the health eeds of populations. In terms of the problems identified by World Health Assembly inter-entions in Period III, the need for training of teachers ranked 13th and in Period IV it anked 6th.

In 1973 the WHO Collaborating Centre for Teacher Training at the University of Illinois, n the USA, produced a collection of papers on this subject. These papers emphasized the se of educational approach (content and methods) appropriate to the changing health roblems, social needs, and economic issues in society. As stated in one paper of this ollection

> "In summary, it may be said that each country should build up its own made-to-measure health services, staffed by national health workers who are adequately trained to meet the health needs of the community that they serve".[32]

Within the framework of the global, comprehensive WHO teacher training programme,[33] by 1975, eight regional teacher training centres were in operation - at least one in every WHO region except Europe; also several such centres had been established at the country level and "had started to train teachers in their national settings and languages".[34] Few WHO programmes have been developed so comprehensively and so rapidly throughout the world (as explained more fully in Chapter VIII). Most of the important concepts in the strategy of training teachers for relevance in medical education were summarized in a WHO publication appearing in 1978.[35]

In 1979, a 10-year review of the WHO global teacher-training programme was carried out that involved site visits to regional and national training centres throughout the world. A major technique of the centres has been to hold relatively short workshops for teachers (predominantly from medical schools); by 1978 more than 700 of these had been held, the great majority in the last few years.[36] The heaviest attendance at workshops was in the Region of the Americas, and the overall distribution of participants from 1972 to 1978 was as follows:

Region	Participants
Africa	323
Americas	12 454
Eastern Mediterranean	1 289
South-East Asia	1 500
Western Pacific	829
Total	16 395

The evaluators drew several conclusions from their study, among which were these:

> "The most significant achievement is undoubtedly the great number of teachers, particularly of medical schools, who have been stimulated by the programme to examine alternative educational processes ... Most importantly, there is now a much greater awareness of not only the importance of training teachers in education but also of possibilities that exist to make such training more relevant, more effective and efficient".[37]

Yet, in global perspective, the observers added:

> "There are still too many educational programmes purporting to train health personnel which are irrelevant to community health needs, too many where the training is not focussed on adaptation to changing needs, and too many which use teaching processes which do not provide optimal conditions for learning".[37]

The ultimate test of the value of the teacher-training programme, so effectively promoted by WHO over the last decade, will be the kind of health service provided by the graduates of the schools whose teachers have been appropriately trained. Will the overall performance of

these physicians (and others) be more responsive to the actual health needs of the populatio than has been that of physicians educated previously ? Evaluation along such lines wil only be possible, of course, many years from now.

Community-oriented education of health personnel

All the health manpower development activities reflecting an objective of relevance tha have been reviewed in this chapter so far could also be considered as programmes to trai community-oriented health personnel. Beyond these, however, there have been still othe programmes, within countries and in WHO, specifically intended to prepare health personnel t meet the overall needs of communities. The recognition of this general issue in the firs years of WHO has been reviewed earlier in this chapter.

Among problems identified by the World Health Assembly interventions in Period III (1962-1972), the need for adaptation of curricula was seventh in rank; this adaptation ordinarily meant making the education of health personnel appropriate to community needs. In Period IV (1973-1980), the more specific problems of the need for community-oriented curricula was tenth in rank, but along with it as ninth in rank was the need for adaptation of curricula. If these two types of problem were aggregated in the tabulation, they would rank third among the more than 20 problems identified.

Advocacy of a community orientation in medical education had been among the recommendations of the expert committee in the ET field reporting in 1953. This report stated:

> "The medical school should assume its logical role of leadership in the community and should cooperate actively with all those agencies concerned with the health of the people by demonstrating and teaching the kind of medicine (including preventive) which deals with the individual's health and illness problems in the community setting".[38]

It is worth noting that in 1953 also a WHO conference on nursing education expressed similar views, emphasizing "that nursing must be related to the local and national needs and that this requires nurses whose education is adapted to varied national circumstances".[39] In 1955 an Expert Committee on Midwifery Training put similar stress on the adaptation of educational programmes to local needs and conditions.[40]

In the programme and budget statement for 1973 (submitted to the World Health Assembly in 1972), community-based education and training was one among seven policies. In GPW6, promulgated in 1976 (for 1978-1983), one finds similarly that health manpower should be:

> "properly attuned to the health problems of the people and suitably trained to respond to health programme and service needs. Education for the health professions must take into account not only the local health situation, but also the local factors that have given rise to this situation, as well as general educational, social and economic factors".[41]

Finally, in the 1978 Declaration of Alma-Ata one reads that to achieve the all-important goal of primary health care community-oriented personnel will obviously be required; such care:

> "relies, at local and referral levels, on health workers, including physicians, nurses, midwives, auxiliaries and community workers as applicable, as well as traditional practitioners as needed, suitably trained socially and technically to work as a health team and to respond to the expressed health needs of the community".[42]

A specific strategy of WHO, with respect to community-oriented medical education, was to strengthen general practice. The second report of the ET expert committee, quoted above, concluded also that:

> "Each country or region should have adequate medical education facilities to provide itself with high-quality general practitioners to serve its needs."[43]

In the years after the Second World War, when WHO was born, there was a great expansion of specialization in medicine in many countries. The post-war extension of social insurance for medical care and the proliferation of hospitals led to vast increases in the medical and surgical specialties. The result in several of the more developed countries was a decline

both relative and absolute) in the availability of general physicians for primary care. gainst this background, a call for strengthening general medical practice, in both undergraduate and continuing education, became part of the movement for relevance in manpower olicy.

In 1963, the meeting of the ET expert committee was devoted to the training of the hysician for family practice. The term "family practice" was essentially synonymous with general practice, connoting service to patients in the community and outside a hospital. The committee recommended that all medical students should "receive some of their training in the setting of family practice".[44] In 1961, the European Region of WHO held a large conference on the preparation of the physician for general practice, which called for many changes in undergraduate medical education; the papers presented at this meeting were published in 1963.[45] Ten years later, in 1971, another European conference was held on the role of the primary physician in health services; a report of this meeting concluded:

> "The complexities of modern medical care systems and of the present-day social environment increase rather than diminish the need for a personal physician to treat, rehabilitate, and care for the patient. This means that the primary practitioner of the future must be, first and foremost, a good physician skilled in the diagnosis and treatment of the common disease conditions of his community."[46]

This advocacy of strengthened training in general or family medical practice was heard mainly in the highly developed countries. In the less developed ones, there were relatively few physicians formally trained and accredited in specialties anyway, so that general practitioners, as such, were not usually perceived to be lacking any more than physicians as a whole. The goal of relevant education for health personnel in developing countries was defined along broader lines. In 1963, when the European Region was discussing the strengthening of general practice, the WHO Executive Board submitted its report on the organizational study on medical education and training to meet priority needs of the newly independent and emerging countries. This study concluded:

> "In addition to professional personnel in medical and paramedical categories, there are required trained auxiliary personnel in large numbers and in appropriate numerical relation to the professionals who will teach, lead and later supervise them ... These auxiliaries have a place of their own in the health team, are especially trained for it, and should not be the product of a lower standard of training in the various professions to which they belong".[47]

Thus, although this study set out to examine medical education and training in the developing countries, its final major emphasis was put on training auxiliary health personnel.

In the Eastern Mediterranean Region, a Conference on Medical Education was held in 1971, focusing on the needs in developing countries. Giving an overview of medical curricula in these countries, the opening speaker put the issue bluntly:

> "In the developing countries, where traditional methods of medical teaching have simply been copied regardless of local circumstances, the results - understandably - have been catastrophic".[48]

To make medical education in developing countries more relevant to the needs, it was proposed at that meeting that (1) the largest possible number of physicians be trained at the lowest possible cost; (2) graduates be motivated to practise as general physicians working with paramedical personnel in rural areas; (3) standards be maintained through continuing education; and (4) specialization be provided within undergraduate training, but only in family medicine, paediatrics, general surgery, and general medicine.

In 1967, the Director-General of WHO spoke of the urgent need for a more relevant type of medical education in the developing countries. He said:

> "copying the medical schools in developed countries is a mistake. New curricula and new methods of training are needed in the developing countries, designed for their special needs ... We must define what the doctors are going to do, what the nurses and the other members of the health team are going to do, and they should be trained to take on, under appropriate supervision, much more responsibility than is usual in the highly developed countries".[49]

Ten years later, the current Director-General was still led by circumstances to state:

> "Education in medical schools, I suggest, has to become relevant to present and foreseeable future community health needs, rather than satisfying professional interests .. For this type of education it is necessary that the community as a whole be used for learning and that the hospital be considered as a place where a certain stage of the disease process can be studied."[50]

The same emphasis on relevance in health manpower training programmes had been expressed in the 1976 World Health Assembly resolution (WHA29.72), which requested the Director-General:

> "to study the extent of action taken by governments in modifying their health manpower training programmes and to assist the Member States in restructuring the curricula for all the members of the health team, especially for physicians at both undergraduate and postgraduate levels, to make them more relevant to the needs of their societies." [51]

The issue of achieving relevant education through community-oriented forms of professional training has been prominent also in nursing. In 1974, for example, an expert committee urged that:

> "Decisions should be taken to initiate and further develop community health nursing services that are responsive to the needs of the community ... Nursing educational programmes should be developed that make community health the central objective of basic and continuing preparation".[52]

In 1977, the Council of International Organizations of Medical Sciences (CIOMS) devoted its annual conference, in collaboration with WHO, to exploring how medical education could be made more relevant to the current and changing health needs of society.[53]

One specific strategy for providing medical, nursing, and other health students with community-oriented education deserves special mention: training outside a teaching hospital. Large general hospitals had been linked with medical schools since the Middle Ages in Europe, and the specialized ward - with numerous patients suffering from certain types of disease - had come to be taken for granted as the appropriate setting for teaching about medicine and surgery, as well as nursing. The proposal, therefore, that some professional education should be provided outside the hospital was a radical departure from well-established policy. Certain innovative medical schools - like that at the University of Zagreb in Yugoslavia - had been teaching students not only outside the hospital but even in the homes of patients, since the early 1950s.[54] In the early 1960s, WHO sponsored a study on the specific methods of teaching medical students in out-of-hospital settings, such as in health centres and public health facilities.[55] In 1967, the ET expert committee concerned itself largely with the same general question. After stating that "confining experience of the student's medical practice to the teaching hospital has serious limitations"[56], the committee concluded that health centres for ambulatory care were highly appropriate for community-oriented teaching. It said:

> "The teaching health centre is stressed more than other institutions because it is probably the most effective device yet developed. It provides for a wide range of student experience in comprehensive community care, a balanced appreciation of the functions of various members of the health team, and an epidemiological orientation to the community as a whole and to its constituent groups".[56]

Finally, in the late 1960s and early 1970s, the several concepts of community-oriented education discussed above - emphasis on preventive and social medicine, effective methods of teaching, stress on general or family practice, use of out-of-hospital educational settings - evolved into a single concept of comprehensively and radically reformed medical education. At several universities (Cali, Colombia; Lexington, Kentucky, USA), the time was reached when the idea of a wholly new community-oriented form of medical school had matured. Thus, within a 5-year period 1965-1969, there developed truly innovative types of medical schools at places as far apart as Brasilia (Brazil), Ankara (Turkey), Bangkok (Thailand), Yaoundé (United Republic of Cameroon), Hamilton (Ontario, Canada), and East Lansing (Michigan, USA). There were, of course, many differences among these schools, but in all of them a major goal was to train physicians and others to work in teams with various health personnel, to be sensitive to the problems of people in their total life setting, and to be oriented

onstantly to the health needs of the community. In the 1970s, additional schools for ealth personnel with a similar community approach developed - at Beersheva (Israel), at Xochimilco (Mexico), at Maastricht (Netherlands), at Tacloban (Philippines), and elsewhere.

WHO's efforts over the years have doubtless contributed to this movement and have naturally encouraged it enthusiastically. In 1978, reports on 14 of these innovative educational programmes were assembled in widely distributed publication.[57] In 1980, case studies on another 13 innovative programmes were published.[58] In effect, the worldwide criticism of the non-relevance of so much medical and related education had led by the 1970s to numerous corrective local responses. As summarized in the Sixth Report on the World Health Situation, published in 1980:

> "For many years the traditional methods of educating health workers were consistently criticized for failure to consider the needs of society as a whole or of individuals as human beings requiring understanding and care. This had led to a greater interest in ways and means of improving the relevance of education to both national health needs and job requirements, as defined in a well-designed health system".[59]

In order to lend force to these innovative schools - each of which was typically a lone pioneer in its own national scene - WHO sponsored a meeting in Jamaica in 1979, at which there was formed a Network of community-oriented educational institutions for health sciences. This network would hopefully strengthen its member institutions through an exchange of ideas and mutual support, and it could be helpful to "other institutions endeavouring to introduce manpower development programmes with similar institutional objectives".[60]

HP-12-0
09265 N82

COMMUNITY HEALTH CELL
LIBRARY AND INFORMATION CENTRE
CALICUT 34

References

1 WHO Official Records, No. 21, 1949, p.80.

2 WHO Official Records, No. 28, 1950, p.212, p.302.

3 WHO Official Records, No. 18, 1949, p.119.

4 Fülöp, T. Analytical review of the world health organization's health manpower development programme, 1948-1980, document analysis. (Unpublished WHO document WHO/EDUC/81/182).

5 Grzegorzewski, E. La medicina preventiva en los estudios médicos. Boletín de la Oficina Sanitaria Panamericana, 37(5): 652, (1954).

6 WHO Technical Report Series No. 69, 1953 (Expert Committee on Professional and Technical Education of Medical and Auxiliary Personnel; second report.

7 Arbona, G. Ensenañza de medicina preventiva y salud pública en la escuela de medicina de la Universidad de Puerto Rico; and Reader, G.G. Los fines de la ensenañza clínica. Boletín de la Oficina Sanitaria Panamericana, 39(2): 185-186 (1955) and 39(6): 594-596 (1955).

8 Seminarios sobre la ensenanza de medicina preventiva. Boletín de la Oficina Sanitaria Panamericana, 41(1): 55-77 (1956).

9 Grundy, F. & Mackintosh, J.M. The teaching of hygiene and public health in Europe: a review of trends in undergraduate and post-graduate education in nineteen countries. Geneva, World Health Organization, 1957 (Monograph Series No. 34).

10 Chaves, M.M. La ensenañza de los aspectos preventivos, sanitarios sociales de la odontología en los cursos de formación profesional. Boletín de la Oficina Sanitaria Panamericana, 48(3): 187-206 (1960).

11 WHO Technical Report Series, No. 175, 1959 (Preventive aspects in the teaching of pathology: seventh report of the Expert Committee on Professional and Technical Education of Medical and Auxiliary Personnel).

12 WHO Technical Report Series, No. 140, 1957 (Conference on public health training of general practitioners).

13 WHO Technical Report Series, No. 266, 1963. (Social aspects in the teaching of obstetrics and gynaecology: fourth report of the WHO Expert Committee on Maternal and Child Health).

14 WHO Technical Report Series, No. 314, 1965. (Nutrition and infection: report of a WHO Expert Committee), p.25.

15 WHO Technical Report Series, No. 269, 1964. (Promotion of medical practitioners' interest in preventive medicine: twelfth report of the WHO Expert Committee on Professional and Technical Education of Medical and Auxiliary Personnel), p.21.

16 WHO Technical Report Series, No. 320, 1966. (University health services: fourteenth report of the WHO Expert Committee on Professional and Technical Education of Medical and Auxiliary Personnel).

17 WHO Official Records, No. 195, 1971, p.19.

18 WHO Official Records, No. 196, 1972, pp.54-59.

19 WHO Handbook of resolutions and decisions, Volume I, 1948-1972, 1973, pp.49-50.

20 World Health Organization Regional Office for the Eastern Mediterranean. The successful teaching of statistics to every medical student: inter-regional consultation on teaching statistics to medical undergraduates. Alexandria, 1978. (Unpublished document).

21 WHO Technical Report Series, No. 154, 1958. (Postgraduate training in the public health aspects of nuclear energy: fourth report of the Expert Committee on Professional and Technical Education of Medical and Auxiliary Personnel).

22 WHO Technical Report Series, No. 155, 1958. (Introduction of radiation medicine into the undergraduate medical curriculum: fifth report of the Expert Committee on Professional and Technical Education of Medical and Auxiliary Personnel), p.3.

23 WHO Technical Report Series, No. 306, 1965. (Public health and medical use of ionizing radiation: fifth report of the WHO Expert Committee on Radiation), p.34.

24 WHO Technical Report Series, No. 208, 1961. (The undergraduate teaching of psychiatry and mental health promotion: ninth report of the Expert Committee on Mental Health).

25 WHO Technical Report Series, No. 235, 1962. (The role of public health officers and general practitioners in mental health care: eleventh report of the Expert Committee on Mental Health).

26 WHO Technical Report Series, No. 275, 1964. (Psychomatic disorders: thirteenth report of the WHO Expert Committee on Mental Health), pp.22-27.

27 WHO Technical Report Series, No. 363, 1967. (Services for the prevention and treatment of dependence on alcohol and other drugs: fourteenth report of the WHO Expert Committee on Mental Health).

28 Mace, D.R., Bannerman, R.H.O. & Burton, J. The teaching of human sexuality in schools for health professionals. Geneva, World Health Organization, 1974 (Public Health Papers No. 57).

29 WHO Technical Report Series, No. 572, 1975. (Education and treatment in human sexuality: the training of health professionals: report of a WHO meeting).

30 WHO Technical Report Series, No. 609, 1977. (Health needs of adolescents: report of a WHO Expert Committee), p.47.

31 WHO Technical Report Series, No. 564, 1975 (Organization of mental health services in developing countries: sixteenth report of the WHO Expert Committee on Mental Health), p.33.

32 Fülöp, T. Training teachers of health personnel. In: Development of educational programmes for the health professions. Geneva, World Health Organization, 1973, p.86 (Public Health Papers No. 52).

33 Fülöp, T. Development of a comprehensive WHO training programme for health personnel teachers. World Health Organization, Geneva, 1969. (Unpublished WHO document PGE/69.2).

34 Fülöp, T. Educating the educators. WHO Chronicle, 32(8): 305 (1978).

35 McGaghie, W.C. et al. Competency-based curriculum development in medical education: an introduction. Geneva, World Health Organization, 1978. (Public Health Papers No. 68).

36 Katz, F.M. & Tiddens, H.A. Progress of the WHO Global Teacher Training Programme: 1969-1979. Geneva, World Health Organization, 1979 (Unpublished WHO document WHO/EDUC/79.178).

37 Ibid., p.31.

38 WHO Technical Report Series, No. 69, 1953, op. cit., p.23.

39 WHO Technical Report Series, No. 60, 1953. (Nursing Education: report of a working conference), p.18.

40 WHO Technical Report Series, No. 93, 1955. (Midwifery Training: first report of th Expert Committee).

41 WHO Official Records, No. 233, 1976, p.69.

42 Alma Ata 1978. Primary Health Care, Geneva, World Health Organization, 1978. ("Health for All" Series, No. 1), p.5.

43 WHO Technical Report Series, No. 69, op. cit., p.23.

44 WHO Technical Report Series, No. 257, 1963. (Training of the physician for family practice: eleventh report of the Expert Committee on Professional and Technical Education of Medical and Auxiliary Personnel), p.35.

45 World Health Organization Regional Office for Europe. Preparation of the physician for general practice: papers prepared for a European Conference on the Training of the Doctor for his Work in the Community, Edinburgh, 1961. Geneva, 1963 (Public Health Papers No. 20).

46 The role of the primary physician. WHO Chronicle, 25(12): 573, (1971).

47 WHO Official Records, No. 127, 1963, pp.184-185.

48 World Health Organization. Aspects of medical education in developing countries. Geneva, 1972, p.9.

49 Candau, M.G. Knowledge, the bridge to achievement". WHO Chronicle, 1(12): 508 (1967).

50 Mahler, H. Tomorrow's medicine and tomorrow's doctors. WHO Chronicle, 31(2): 62 (1977).

51 WHO Handbook of resolutions and decisions, Volume II, 4th ed., Geneva, 1981, p.124.

52 WHO Technical Report Series, No. 558, 1974 (Community health nursing: report of a WHO Expert Committee), pp.26-27.

53 Gellhorn, A. et al., ed. Health needs of society: a challenge for medical education. (10th CIOMS Round Table Conference, Ulm, Federal Republic of Germany, 6-10 July 1976 and Scientific Session of the 10th General Assembly of CIOMS, Geneva, 10th November 1976). Geneva, 1977.

54 Dogan, S. Yugoslavia. In: Purcell, E., ed. World trends in medical education: faculty, students, and curriculum. Baltimore, Johns Hopkins Press, 1971, pp.91-95.

55 Training medical students outside the hospital. WHO Chronicle, 18(11): 423-424 (1964).

56 WHO Technical Report Series, No. 355, 1967 (The use of health service facilities in medical education: sixteenth report of the Expert Committee on Professional and Technical Education of Medical and Auxiliary Personnel), p.33.

57 Katz, F.M. & Fülöp, T. Personnel for health care : case studies of educational programmes. Geneva, World Health Organization, 1978. (Public Health Papers No. 70).

58 Katz, F.M. & Fülöp, T. Personnel for health care : case studies of educational programmes. Volume 2. Geneva, World Health Organization, 1980. (Public Health Papers No. 71).

59 World Health Organization. Sixth report on the world health situation, 1973-1977. Part I: Global analysis. Geneva, 1980, p.188.

60 World Health Organization. A network of community-oriented educational institutions for health sciences; report of the inaugural meeting held in Kingston, Jamaica, from 4 to 8 June 1979. Geneva, 1979, p.2. (Unpublished WHO document HMD/79.4).

Chapter XI

INTEGRATION OBJECTIVE: HEALTH SERVICE NEEDS AND MANPOWER DEVELOPMENT

A final objective that may be identified in the WHO programme of health manpower development (HMD) is to achieve integration both within the HMD process, among its main components (health manpower planning, production and management) and between this process and the health services development in Member States. This objective constitutes, in a sense, the culmination of several other policy objectives reviewed in previous chapters. Before tracing the rise of the concept of integration as an objective, it will be helpful to consider briefly some highlights in the world history of health services and the development of education for health personnel.

Historical background of health services and personnel education

The tasks of providing organized health services to populations and of educating health personnel have evolved historically along quite separate paths. Only in recent years have pressures developed to make these converge.

The organized provision of health services has been undertaken historically by a variety of social entities. In ancient Greece, the city-states appointed salaried doctors to give medical care to sick freemen, while slaves were the responsibility of their masters. The armies of ancient Rome had arrangements for the treatment of soldiers who were wounded or sick. In the Middle Ages the Christian Church, with religious motivation, played a key role in the establishment of hospitals for the seriously sick and destitute.[1]

As industrialization developed in nineteenth century Europe, workers and other groups of people organized the first societies for the collective economic support of sickness costs; later these insurance programmes came under governmental regulation, and their scope (both in population coverage and in the range of services composed) gradually broadened. Meanwhile, local and then national governments undertook actions for environmental sanitation, for the control of communicable diseases, and for other forms of prevention. Both the social insurance and the public health ideas spread in the twentieth century from Europe to other continents. In the great majority of countries of the world there eventually arose a central ministry of health, with steadily expanding responsibilities for both preventive and curative health services. Other governmental and private agencies also developed for the health care of certain populations or of people with certain diseases.[2]

The systematic training of personnel for the provision of health services evolved along a quite separate path. Education of physicians was the first formal effort, originating in Salerno, Italy, in the ninth century. Universities arose in most of the main cities of Europe during the next several centuries, and many of them included faculties of medicine.[3] Since the universities were an outgrowth of the European Renaissance, their initial role was the accumulation and transmission of classical (Greek and Roman) knowledge, and later the acquisition (through scientific study) of new knowledge. To play this role, they adopted a position of independence from the Church, the government, and other important social entities. Even when universities came to be financed mainly or entirely from public funds, a strong tradition of autonomy persisted.

Thus, the education of physicians by universities was regarded as the responsibility solely of professors in the faculties of medicine. The numbers of candidates prepared and the content of their instruction were decided exclusively by the faculty. Meanwhile the rise of capitalism and free trade created an environment in which the trained physicians worked as a liberal profession - free to practice their art and sell their services wherever and however they chose. In some countries, after the fourteenth century, government licensure laws began to specify certain requirements for the practice of medicine, but it was several more centuries before any public regulation affected the number of physicians trained or the content of their education. Autonomy of the universities and freedom of the medical market were the dominant conditions.

The zealous guarding of university autonomy had substantial justification. The early struggles of great scientists like Galileo or Copernicus against repression by the centres of power are well known. Only by freedom from external interference - whether from the Church, the government, or elsewhere - could there be an uninhibited search for knowledge and truth. The reality in universities has not always corresponded to this ideal, but academic freedom for scientists and scholars has still been a central principle in the development of institutions of higher education. Unfortunately, this freedom has often isolated university teachers in ivory towers, absorbed in research and detached from the problems of the real world.

It was only in the early twentieth century that social pressures arose to train physicians and other personnel to meet the needs of populations. In fact, the first conception of needs was simply equated with market demands. Thus in 1923 there were an estimated 229 medical schools in the world; in 1953 there were over 500. During these 30 years, more medical schools were established throughout the world than in all previous centuries.[4] This clearly reflected the perception of a much greater demand for physicians in these recent decades.

The formal education of nurses developed in nineteenth century England, not in universities but in hospitals - where the needs for such personnel were felt. The need for other types of health personnel (laboratory technicians, physical therapists, record clerks, etc.) soon followed, with schooling for them being provided by divers types of institution. Then, there slowly emerged a recognition that a certain minimal number of physicians and allied health workers would be required to meet the health care demands, if not the needs of populations.

Since these two movements - organized health services and health personnel training - evolved along quite separate paths, the administrative bodies concerned about them were also typically separate. In governments, the principal authority concerned with the health services was a ministry of health or some similar agency; the principal authority concerned with universities and other training institutions was a ministry of education. Parallel dichotomies existed outside government, in various voluntary associations and interest groups. If the need or even the economic demand for health services was to be appropriately satisfied, however, some coordination between these two sectors would clearly be necessary. This was all the more essential as interest mounted in society to meet human needs - many of which were hidden below the surface - as distinguished from overt economic demands.

Recognition of the importance of coordination between health services and health manpower development activities was expressed in countries in a variety of forms (to be discussed later). The evolution of this issue in the course of the development of WHO may now be considered.

Rise of the integration concept in WHO

The concept of integrating health manpower and health services development was implicit in the strategies towards other objectives, reviewed in previous chapters. The call for greater quantities of conventional types of health personnel (Chapter IV) was obviously made in response to this demand to provide manpower for rendering needed services. Even the quality objective (Chapter V) was presumably intended to assure that the services rendered would be sound - according to different criteria. The objective of geographic coverage (Chapter VII) with appropriate health personnel was manifestly formulated in order to assure that services would be physically accessible to all the people. The planning of health manpower (Chapter IX) and educational programmes relevant to community needs (Chapter X) also obviously implied rational responses to the true needs of people for various health services. Probably more than any other objective, that of relevance has led directly to the concept of integration, as an ultimate strategy for achieving it. Accordingly, an explicit objective of integration between health manpower and health service development constitutes a culmination of strategies pursuant to many other goals.

Some expression of the importance of coordination between health services and health manpower development, nevertheless, appeared in the early years of WHO. The Annual Report of the Director-General for 1951 states that in WHO's assistance to training schools there was a "growing tendency to consider the programmes of educational institutions as part of a

complete plan for improving the health of a population". In this connection, "close contact between health administrators and teaching institutions was particularly encouraged".[5]

In Period II (1952-1961), there was also occasional reference to the need for collaboration between training institutions and health authorities. For example, at the Tenth World Health Assembly, in 1957, the delegate of Greece said that there should be assurances that "training activities would be fully in accordance with the requirements of the Greek health services".[6] In the Director-General's Annual Report for 1961, apropos of the Region of the Americas, it was said that:

> "Member governments have been urged to strengthen collaboration between their ministries of health and of education, and to bring them into closer relation with university authorities in order to increase and improve the training of personnel for health services".[7]

These were only isolated references to the integration concept, however, not followed up by any policy decisions or programme action. This is perhaps not too surprising in the light of the general circumstances of Period II - with its cold war atmosphere, the long absence of voices from the socialist countries (where health manpower training was usually under health ministries), the proud autonomy of universities, and the general conservatism in many countries.

In Period III (1962-1972), the issue of coordination between health manpower development and the health services of countries became more actively discussed. Among 23 main problems identified by study of the interventions at the World Health Assemblies, the need for coordination between schools for health personnel and health administrations ranked 12th. In an assessment of UNICEF/WHO-assisted education and training programmes, submitted to an Executive Board meeting in 1971, the first problem noted was the weak liaison between health and educational authorities.[8] The identification of this as a problem was doubtless related to a recommendation of the UNICEF/WHO Joint Committee on Health Policy, at its 1969 session, that the "separation of educational and health authorities should disappear".[9]

The Third General Programme of Work, for the years 1962-1965 (actually prepared in 1960) also makes reference to an integration objective in the HMD programme. It states that "since the professional and technical education of personnel is of fundamental importance to the strengthening of national health services, these two objectives must be closely connected in the policy of the Organization".[10] There was, however, no programme designed to follow up this concept in this period, nor was the concept mentioned again in GPW4.

In the Eastern Mediterranean Region, a significant meeting was held in 1963. It was attended by both medical educators and public health administrators, who jointly discussed the problems of medical education.[11] At the Nineteenth World Health Assembly, in 1966, the delegate of Turkey referred to experience in his country at Erzurum, where:

> "the teaching staff of the faculty of medicine and the doctors of the national health service work together in close cooperation, not only in the hospitals but also in the rural health units of the region. This system will make it possible to train future doctors within the national health service and prepare them for the responsibilities awaiting them in the community".[12]

Then Turkey reported at a later World Health Assembly that a Medical Education Coordinating Board, composed of the deans of medical faculties, had been established within the framework of the Ministry of Health and Social Assistance.

At World Health Assemblies in 1967 and 1968, Colombia and Argentina spoke also of progress made in cooperation among their faculties of medicine, ministries of health, and social security organizations - with the objective of adapting educational programmes to actual community needs. Rwanda gave a similar report in 1970, and in 1972 Israel spoke of its integrated project at Beersheva, where the dean of the medical school served also as director of all organized health programmes in the province. For some years, representatives of the socialist countries (where, in most cases, institutions for training health personnel had long come under the supervision of ministries of health) had also spoken at World Health Assemblies of the value of such integration of education and services.

In 1966, the Third World Conference on Medical Education, sponsored by WHO, was devote to the theme of medical education - factor in socioeconomic development. One concep emphasized at this conference was "the importance of considering medical education, not as a end in itself, but as a means for achieving the improvement of community health".[13] A the Twenty-third World Health Assembly in 1970, the Technical Discussions were devoted t education for the health professions. Of the five main conclusions to these discussions two were clearly on the principle of integration between the development of health service and of personnel. They called for:

> "close cooperation between those responsible for health services to the public and those responsible for the training of the necessary personnel ... [and]
> continuous study of the interrelationships between the education and health services, and of the effectiveness of these services through systematic evaluation and operational research, with a view to introducing any changes that appear indicated".[14]

A meeting in the African Region, reported in 1972, explored the same issue. After referring to the importance of planning health services, and of priorities defined by such planning, a speaker, from one of the African medical faculties, said:

> "These priorities should not only be priorities in terms of what is to be done at the service level, but there should be some priority as to who is to be trained and the numbers of each category ... There is need for a carefully worked out coordination and dialogue between ministries of health, medical schools and professional associations".[15]

Thus, the concept of coordinating health manpower training with the requirements of a country's health services was recognized implicitly in the very first years of WHO and somewhat more explicitly in Period II (1952-1961). During Period III (1962-1972), the issue of coordination between health and education ministries was actively discussed on many occasions. Several countries reported specific strategies being pursued nationally to promote cooperative planning and other working relationships developed between health administrators and medical faculties. The stage was set in WHO for the understanding of the importance of a policy to promote the integration of health services and health manpower development in Period IV. Before examining this recent period, however, we may acquire a greater perspective on the integration of the education and the health sectors by considering several coordinated activities actually taking place in countries.

Coordinated health services and health manpower development activities in countries

Development of the concept of integration of health services and health manpower development arose not only from the theoretical logic of the idea. Experience for some years around the world had demonstrated that cooperation between the two sectors could and should be carried out on many levels. One may find examples of such cooperation in various countries with respect to activities on health manpower planning, production, and management (or use).[16]

Regarding health manpower planning, ministries of health in numerous countries have for some years made estimates of national requirements for different types of personnel. This has been done in both developed and developing countries, and the numerical estimates may have some very limited influence on the decisions of ministries of education, of planning, and of course of health (in so far as they may be training certain types of personnel themselves). Practices in Sweden are illustrative; that country's Ministry of Health and Social Affairs has a Permanent Committee for National Health Planning, which around 1970 projected the need for physicians up to the year 1990. The Swedish Ministry of Education accepted the recommendation as a basis for its financial support of medical schools in the universities.[17] In Colombia during the 1960s the Ministry of Public Health, jointly with the Colombian Association of Medical Schools, carried out an extensive nationwide study on health manpower and medical education. This study not only compiled data on these two subjects, but it also included a national survey of morbidity and the utilization of health services by the population.[18] The information from this research contributed to the subsequent planning of health manpower training by the universities, the hospitals, and other agencies.

In many countries, there have been national health councils representing several ministries, which inter alia make recommendations on the output of physicians by the universities. Such a council existed, for example, in Iran. Along with the Minister of Health, it included high officials from the Ministry of Higher Education, the Ministry of Social Welfare, and other organizations. In Sri Lanka a Planning Committee on Manpower and Education (in all fields) was set up in 1964; among other things it set goals for the future production of physicians and nurses.[19] The ultimate influence of these coordinating bodies has not always been great, and sometimes nil.

At the stage of health manpower production, other forms of coordinated activity may be identified in countries. In Canada, for example, at the national level there is no ministry of education, but equivalent agencies function in all ten provinces; these provincial bodies provide the main financial support for the medical schools. Yet, the Ministry of National Health and Welfare has given federal grants to the provinces for capital expansion of medical school facilities.[20] Another way that health ministries subsidize medical and nursing schools is through their financial support of hospitals used for clinical teaching. This pattern is found in countries everywhere, but is especially important in developing countries, where a large hospital in the national capital typically involves major ministry of health expenditures for service while, at the same time, providing an important setting for teaching purposes.

Also relevant to manpower production, throughout the world and especially in developing countries, ministries of health often conduct training programmes themselves. The Public Health College for training auxiliary health workers at Gondar, Ethiopia (discussed in previous chapters) was operated not by educational authorities but by the Ministry of Health. In Peru there were 10 schools for training professional nurses in 1963. Of these, 3 were operated directly by the Ministry of Health and the other 7 were based in hospitals; the support for these facilities was also derived in part from the health ministry.[21] The general regulation of health manpower through official registration is also frequently a responsibility of national ministries of health - in Japan, for example.[22]

Finally, with respect to the management or deployment of health manpower, just as health ministry hospitals serve teaching purposes, university-sponsored hospitals obviously give medical care to patients. Thus, in Accra, there is a university-sponsored hospital which serves patients from all of Ghana; moreover, the medical school faculty members sometimes visit peripheral health care institutions under the health ministry, as consultants.[23] A region administered by authorities which also managed the medical school, in and around Beersheva, Israel, was noted above. Similar combined teaching and medical care areas have been administered in several Latin American countries for some years; these have been described as follows:

> "The programme began in 1972 and has among its objectives the involvement of medical schools with the health care delivery system in adjoining areas, participation of clinical teachers in education and services at all levels of the system, curricular modifications to allow for clinical learning at various levels of the system to be equal in rank, in terms of academic credits, to experience in the university hospital, and development of a regionalized multi-level health care system in the chosen area, in agreement with health authorities".[24]

The most thorough implementation of the integration of health manpower development with the provision of health services is found in most (though not all) of the socialist countries. The mechanism was first worked out in the USSR, but one may note that it did not take shape overnight. Following the revolution in 1917, all health services were brought under the Ministry of Health, but the education of physicians remained in the universities under the Ministry of Education. After 20 years of experience with this dichotomy, the Government decided that the numbers and types of physician and allied personnel being produced were not entirely consistent with the health needs of the population. Therefore, in 1937 the medical schools were withdrawn from the universities and reorganized under the Ministry of Health as medical institutes; corresponding responsibility was assumed by this ministry for training pharmacists and all types of middle-level medical personnel.[25] This education/health services linkage tends to involve faculty members in extensive consultation with, and also quality surveillance of, the operations of the health care system.

This review of various sorts of integration between health services and manpower develop ment (planning, production, and management), observable in countries throughout the world, i obviously not comprehensive. It may be enough, however, to demonstrate that the concept o integration need not be regarded as a detached theory, but has already started to be imple mented, at least occasionally, in some countries. Identification of these selecte instances of integration should not give an unrealistically rosier picture of the healt services and manpower development process than exists in reality. The extent of inte gration, or often rather coordination, obviously varies with the special political and socia circumstances in each country. With this background of observations of national experiences, we may now discuss the evolution of the integration objective in the Organi zation's HMD programme during Period IV.

Towards integration of health services and manpower development - Period IV

By the beginning of Period IV (1973-1980), the value of coordinating the education and the health service sectors had become appreciated both by the WHO governing bodies and in Member States in consequence of their experience. Among the problems articulated through World Health Assembly interventions, the need to integrate health services and health manpower development had risen to fifth in rank (from rank 12 in Period III).

In GPW6, for the period 1978-1983, one finds the most forthright declaration of the objective of integration between a country's health services and health manpower development policies and practices. Preparatory to GPW6, which was submitted to and approved by the Twenty-ninth World Health Assembly in 1976, the Director-General submitted an important overview of the entire HMD programme. In this document, among the major problems identified are:

> "lack of integration, and sometimes even coordination, of the different elements of the health manpower development process (planning, 'production', management) even where all these elements exist; and ... the fact that health manpower plans - if there are any - are not taken into account either quantitatively or qualitatively by the training institutions, which often do not belong to the same supervisory authority as the planning unit; ..... and finally, lack of coordination between the health manpower development process and other interested development sectors and agencies, primarily in general education but also in social security, labour, agriculture, etc."[26]

Still other difficulties of non-coordination are recited in this hard-hitting document, such as:

> "unsuitability of curricula, methods and evaluation for the training of health workers to meet community health needs and to work in teams, educational programmes being primarily directed towards medical and institutional curative care and largely irrelevant to the tasks required outside institutional settings or in health promotion, preventive work and rehabilitation ... In the absence of collaboration between those responsible for the training of health personnel, on the one hand, and for health care delivery, on the other, educational programmes tend to develop in isolation from the constantly changing health care needs ...".[27]

With such a forthright elaboration of problems, preparatory to GPW6, one finds an equally forthright declaration of the objective of integration in the final language of GPW6, adopted by the World Health Assembly in 1976. This important formulation of policy objectives for the years 1978-1983 states:

> "WHO should make sure that its programme for <u>health manpower development</u> fully supports the development of general health services. This implies adapting educational objectives to health needs."[28]

Then, in more specific elaboration of HMD objectives, GPW6 states further that:

> "The target will be the development of a permanent mechanism to ensure the integration of health manpower development within the framework of health services on the one hand, and of the educational services and the more general framework of socio-economic development

on the other hand ...(WHO) will encourage better coordination of the efforts of health and education ministries, and more generally of all concerned with education to solve health manpower problems."[29]

wo years later, at the Alma-Ata Conference in 1978, the recommendation was made that governments undertake or support reorientation and training for all levels of existing ersonnel" and that health workers "should be socially and technically trained and motivated o serve the community ...".[30]

In the WHO programme budget for 1978-1979, prepared in 1976, one finds the first explicit tatement of the objective of integration in this long series of administrative documents:

"To promote the integration of health services and manpower development, including an essential health manpower management component, and with emphasis on developing countries".[31]

lso in the medium-term programme for health manpower development, approved by the Thirty-irst World Health Assembly, in 1978, the first of three programme areas to which WHO would irect its efforts is defined as:

"Manpower planning and management to meet health service requirements (including the promotion of mechanisms for integrating health services and manpower development) ...".[32]

The most important and explicit World Health Assembly resolution on this issue was adopted at the Twenty-ninth World Health Assembly in 1976 (WHA29.72), when the Director-General was requested:

"to assist Member States in the formulation of national health manpower policies that are responsive to health service requirements and consistent with policy in other sectors; (and) to intensify efforts to develop the concept of integrated health services and manpower development so as to promote manpower systems that are responsive to health needs, and to collaborate with Member States in introducing a permanent mechanism for the application of the concept and in adapting it to the requirements of each individual country".[33]

The WHO programme budget for 1980-1981 is equally explicit in declaring that the HMD programme:

"has a basic philosophy: relevance of the whole health manpower medium-term programme process to the needs of the health services and, through them, to real health needs and demands of the total population, which are expressed in the concept of the integration of health services and manpower development".[34]

In the Sixth Report on the World Health Situation for 1973-1977, a section on The health manpower system describes developments in various countries which fundamentally reflect accomplishments in the integration of health manpower with health services. The report states:

"A few countries (e.g., Hungary, Poland, and the USSR) have completely integrated these two components of the health system into a single and comprehensive system at the top level of government. In the Americas, for example, 12 countries have established health manpower offices or units within their ministries of health. Among them, Colombia has established, in addition, an interministerial coordinating committee".[35]

Other national coordinating mechanisms in Canada and the United Kingdom are described. Demonstrations of integrated Health Services and Manpower Development (HSMD) are reported from Iran, Israel, and Sierra Leone.

Beyond these indications of developments in official WHO documents, further reflections of the evolution of the integration may be noted. In 1974, an expert committee discussed the planning of medical education programmes and, among its recommendations, stated:

"The types and extent of services to be provided should be used to determine the healt manpower policy, i.e. the definition of types and numbers of health personnel needed t deliver and evaluate the identified services and the functional roles they would have t fill".[36]

Lest any question remained on the implementation of such a policy, the Committee added:

"Decisions about present and future medical school policy should be made on the basis o consultations with, and data supplied by, appropriate representatives of the university the medical school, the practising professions, the ministries of health, education finance and planning (or their equivalents), and the society to be served. This is bes achieved by the formation at the outset of a planning committee composed of such repre sentatives, and measures should also be taken to ensure continuing participation of thes representatives throughout the life of a new school or an existing school."[36]

Still further refinements of these detailed recommendations were made in 1975 by the WH Study Group on the Planning of Schools of Medicine. This group offered such specific HSM recommendations as these:

"It is recommended that educational objectives should be formulated at an early stage and that these should be based upon the tasks to be performed by the students at the en of their training. These objectives should be expressed in behavioural terms attitudes, skills and knowledge ... The administrative structure of the medical school o health sciences centre should be related to the institutional goals but flexible enoug to permit adjustments to meet the changing needs of society and advances in medica science and technology".[37]

In maternal and child health, the expert committee that met in 1976 struck the same note o integration, when it stated:

"Health manpower development should be considered in relation to national health plan and overall manpower policies, and should be responsive to health service require ments."[38]

In 1976 and 1977, the WHO Chronicle reported extensively on the development of the HSMD concept. The November 1976 issue was devoted entirely to health manpower development; the first article presents an historical review of the entire HMD programme in WHO and how it hac culminated in the HSMD concept. It states that:

"the conditions for a major breakthrough in solving the manpower problems of the developing world, and in finding new solutions in the developed countries also, are increasingly being fulfilled ... [but] this breakthrough has not yet been achieved ... What is needed is an integrated approach to planning and programming, followed by the consistent, patient, and tenacious implementation of national plans".[39]

The same theme of integration of medical education with the guiding principles of a national health policy permeated a meeting on "medical education in Latin America and the Caribbean" held in Venezuela in 1976 and reported in 1977.[40] It was also embodied in a meeting of countries of the African Region in 1978, where a representative of Mozambique spoke of the development of health personnel in accordance with "the type of health service capable of really serving the people".[41]

In 1978, the Eastern Mediterranean Region of WHO held a major conference of ministers of health, ministers of education, medical school deans, and others; this was devoted entirely to an exploration of methods to achieve effective integration of health services and manpower development. The conference recommended that each country should:

"Set up a coordinating mechanism to play, organize, and follow-through the functional integration of health services and health manpower development and to take all the decisions needed".[42]

To implement such a process, it was also recommended that participation should come not only from those concerned with health services and with the training of all types of personnel, but also from "those in other development sectors, and the people, who are the 'consumers' of health services".[42]

Thus, a major feature of Period IV in the entire HMD programme was the culmination of all ne objectives reviewed previously (particularly that of relevance) into a broad yet highly ractical strategy of integrating the health services and health manpower development olicies and practices. Several WHO meetings and documents advocated permanent mechanisms t the national level to achieve this integration. Only by deliberate and concerted efforts n countries and in WHO was progress made towards integrating these two historically separate ut inherently interdependent activities.

References

1 Sigerist, H.E. Medicine and human welfare. New Haven, Yale University Press, 1941.

2 Rosen, G. A history of public health. New York: MD Publications, 1958.

3 Castiglioni, A. A history of medicine. New York: Alfred & Knopf, 1947.

4 Roemer, M.I. Comparative national policies on health care. New York, Marcel Dekker 1977, p.62.

5 WHO Official Records, No. 38, 1952, p.27.

6 WHO Official Records, No. 79, 1957 p.235.

7 WHO Official Records, No. 114, 1962, p.71.

8 WHO Official Records, No. 195, 1971, p.32.

9 WHO Official Records, No. 178, 1969, p.21.

10 WHO Official Records, No. 102, 1960, p.57.

11 World Health Organization Regional Office for the Eastern Mediterranean. Annual Report of the Regional Director. Alexandria, 1963, p.4. (EM/RC13/2).

12 WHO Official Records, No. 152, 1966, p.193.

13 Third World Conference on Medical Education. WHO Chronicle, 21(11):455 (1967).

14 Education for the health professions: technical discussions at the Twenty-third World Health Assembly. WHO Chronicle, 24(10):444-449 (1970).

15 Sai, F. Planning of educational programmes to meet service realities". In Biomedical Lectures, 1970-1971 Series. Brazzaville: World Health Organization Regional Office for Africa, (AFRO), 1972, pp.56-57 (AFRO Technical Papers No. 4).

16 Roemer, M.I. National experience in coordination of health services and health manpower development. In: World Health Organization. Report on consultation on health services and manpower development Geneva, 6-8 September 1976. Geneva, 1977 (Unpublished WHO document HMD/77.1).

17 Lindgren, S.A. Sweden. In: Douglas-Wilson, J. & Maclachlan, G. (Editors) Health service prospects: An international survey. London, The Lancet, 1973, p.116.

18 Ministry of Public Health of Colombia and Colombian Association of Medical Schools. Study on health manpower and medical education: III. Working papers & reports. Washington, DC: Pan American Health Organization, 1967.

19 Simeonov, L.A. Better health for Sri Lanka. New Delhi: World Health Organization Regional Office for South-East Asia, 1975 (Unpublished document).

20 Roemer, R. and Roemer, M.I. Health manpower under national health insurance: the Canadian experience. Washington, DC, US Department of Health, Education, and Welfare, 1976 (DHEW Publication (HRA) 77-37).

21 Hall, T.L. Health manpower in Peru: A case study in planning. Baltimore, Johns Hopkins Press, 1969.

Roemer, R. Legal systems regulating health personnel. Millbank Memorial Fund Quarterly, 46: 431-471, October 1968.

Sai, F.T. Ghana. In: Douglas-Wilson, J. & Maclachlan, G., ed. op cit., pp.125-155.

Chaves, M.M. Strategies for improving health in Latin America. Battle Creek, MI, Kellogg Foundation, 1976, pp.15-16.

Sigerist, H.E. Medicine and health in the Soviet Union. New York, Citadel Press, 1947.

World Health Organization. Health manpower development. Geneva, 1976, pp.18-19. (Unpublished WHO document A29/15.)

Ibid., p.19.

WHO Official Records No. 193, 1976, p.77.

Ibid., pp.102-103.

Alma-Ata 1978: Primary Health Care, Geneva, World Health Organization, 1978. ("Health for All Series, No.1), p.27.

WHO Official Records No. 236, 1961, p.161.

World Health Organization. Medium-term programme for health manpower development. Geneva, 1978, p.7. (Unpublished WHO document A31/18).

WHO Handbook of resolutions and decisions, Volume II, 4th ed, 1981, p.124.

WHO Official Records No. 250, 1978, p.234.

World Health Organization. Sixth report on the world health situation 1973-1977, Part I: Global analysis. Geneva, 1980, pp.183-184.

WHO Technical Report Series No. 547, 1974 (The planning of medical education programmes: report of a WHO Expert Committee), p.23.

WHO Technical Report Series No. 566 (The planning of schools of medicine: report of a WHO Study Group), p.38.

WHO Technical Report Series No. 600, 1976 (New trends and approaches in the delivery of maternal and child care in health services: sixth report of the WHO Expert Committee on Maternal and Child Health), p.60.

Fülöp, T. New approaches to a permanent problem: the integrated development of health services and health manpower. WHO Chronicle, 30(11):437 (1976).

Pan American Health Organization. First meeting on basic principles for the development of medical education in Latin America and the Caribbean; final report. Washington, DC, 1977, p.18. (PAHO Scientific Publication No. 341).

Marzagao, C. Mechanisms for development of health personnel - the Mozambican experience. In: Biomedical Lectures, 1976-1977 Series. Brazzaville, World Health Organization Regional Office for Africa, 1978, pp.33-41. (AFRO Technical Papers No. 13).

World Health Organization Regional Office for the Eastern Mediterranean. An integrated approach to health services and manpower development: Report of a Ministerial Consultation, Teheran, 26 February - 2 March 1978. Alexandria, 1978., p.52.

PART THREE

OTHER PERSPECTIVES

Chapter XII

EXPERIENCES IN SELECTED COUNTRIES

The previous chapters have examined health manpower policy development in WHO, and how it as been shaped by interactions with countries - analysed according to eight major policy bjectives. In order to learn about the dynamics of health manpower development (HMD) as a hole in Member States, with respect to the interplay of all objectives, field studies were ade in six selected countries.

election of countries

The countries studied were chosen because they are developing ones; they are located in frica, Asia and Latin America: Barbados, Costa Rica, Ethiopia, Gabon, Indonesia, and alaysia.

The choice of these countries resulted from a combination of factors involving: (1) dentification of a number of countries that deviated significantly in their supplies of uman health resources from statistical indices that would be "expected" on the basis of heir GNP (gross national product) per capita; (2) the suggestions of WHO regional offices; nd (3) the willingness of the country to participate in the study.

In so far as the HMD process is inevitably influenced by a country's level of socio-conomic development, it should be helpful to consider the findings of these six country ield studies in some logical relationship to this level. Accordingly, an estimation has been made of each country's level of development based upon three widely accepted indices: (a) GNP per capita, (b) rate of literacy, and (c) average life expectancy for males. In order to convert the GNP measurements into numbers expressible from 0 to 100, they have been converted into index numbers with the highest one (Gabon - $3776) represented by 100. Then an average has been calculated including this index along with the percentage literacy rate and the figure (in years) for male life expectancy. This composite average is designated the P/L/E Index.

Using the P/L/E index as an approximate measurement of the country's overall level of development, the six countries studied have been ranked in Table 7. The use of this multifactor index may give a more reliable impression of a nation's general development than the use of per capita GNP or any other single measurement alone. Accounts of health manpower developments in each country will be presented in the ranking order shown in Table 7.

For each country, we shall present the highlights of the information gathered according to the following topics:

Background: major social and political circumstances which could be expected to influence the country's health sector, in general, and its health manpower development, in particular;

HMD process: noteworthy features of health manpower planning, production, and measurement;

WHO relations: major recognized impacts of WHO on the national HMD process, the country's recognized impacts on WHO, and proposals for the future.

In conclusion, we shall offer some observations on any general inferences that may be drawn from the six country field studies.

Table 7. Six selected countries by index of development, based on GNP per capita, literacy, and life expectancy (P/L/E index), from sources around 1978

Country	GNP per capita	GNP index	Literacy %	Male life Expectancy (years)	P/L/E index
Ethiopia	US$ 110	2.9	10.0	36.5	16.5
Indonesia	US$ 300	7.9	62.0	47.5	39.1
Malaysia	US$ 930	24.6	60.0	65.4	50.0
Gabon	US$ 3776	100.0	12.4	41.9	51.4
Costa Rica	US$ 1240	32.8	88.0	61.9	60.9
Barbados	US$ 1940	51.4	98.2	62.7	70.8

Ethiopia

As shown in Table 7, this country in the north-eastern part of Africa is minimall developed, according to all three indicators used. Its population in 1978 was 30 000 000 the vast majority of whom are rural and engaged in agriculture.

Background. Clearly relevant to the current health sector in Ethiopia, and to the HM process within it, was the social revolution in 1974. After centuries of monarchistic rul and essentially feudal conditions of life and land-ownership, a massive famine in 1973 led t mutiny by the army, dethronement of the Emperor, and the establishment of a socialist state Extensive land reform was instituted, and centralized planning (with some input from loca communities) was started in many sectors, including health. The people have been organize into Farmers' Associations (FA) in the rural areas, and the Urban Dwellers' Association (UDA) in the urban areas, also known as Kebeles.

HMD process. The new revolutionary government has prepared relatively comprehensive plans for a regionalized network of health facilities, to be staffed by designated types of personnel. Precise plans for training of these personnel have not been finalized, but the general blueprint, towards achievement of which efforts will be directed, involves six levels as follows:

(1) At the community level, for each FA and each Kebele there is at least one community health agent (CHA) and at least one "certified" traditional birth attendant (TBA).

(2) At the next higher level, for each 10 000 people there is to be a health station, staffed by three health assistants. Currently 1336 such health stations exist and an additional 2000 are planned, for a total of 3336.

(3) For each 50 000 population there is to be a health centre, staffed by one physician, two or three nurses, one sanitarian, one laboratory technician, one pharmacy technician, three health assistants, plus clerical and maintenance personnel. There are now 127 such health centres, and a total of 327 are currently planned.

) The next level is intended to have a medium-sized hospital staffed by 2 or 3 physicians plus allied health personnel.

) In each of the 14 health regions in Ethiopia (plus the national capital, Addis Ababa) there is to be a regional hospital with one physician for each of the major specialties (internal medicine, surgery, paediatrics, and obstetrics-gynaecology), with the necessary allied personnel.

) In the national capital there is already one major central hospital with a full range of medical and surgical specialists and other staff.

t is hoped that the above blueprint can be implemented during the years 1981-1990.

Regarding health manpower production, the major past achievement in Ethiopia was the ublic Health College at Gondar, discussed in previous chapters. During more than two ecades during which this WHO-supported institution operated (1954-1975), a total of 1229 uxiliary health workers were trained - about 60 per year. These were distributed as ollows:

Health officers (4-year course)	432
Community nurses (3-year course)	421
Sanitarians (2-year course)	376

urrently only the training of sanitarians is continuing at Gondar.

Since the 1974 revolution, the other training programmes have developed as follows:

Community health agents (CHA - for the associations) - a 3-month course, predominantly on preventive measures. In each region there are to be 5-10 field training centres, each producing about 100 agents per year. Eventually at least one CHA is to serve each of the 23 000 farmers' associations and of the Kebeles. The same applies with TBAs.

Health assistants (for the second-echelon health stations) - an 18-month course for these personnel, formerly known as dressers. Schools for this training already exist and are based at hospitals; they have been expanded from 4 to 10 currently. There are now 4000 health assistants, and 11 000 are to be available by 1990.

Nurses - their training formerly required 3.5 years but is now being reduced to 2.5 years. There had been 7 nursing schools graduating about 40 nurses each per year (total of 280); in addition, there was the Gondar course for community nurses. Now the conventional registered nurse (RN) course will be unified with the Gondar-type community-oriented course in 4 larger schools training 100 nurses each (total of 400 per year).

Laboratory technicians - an 18-month course to train junior technicians, operated at the Central Laboratory in Addis Ababa. After 3 years of laboratory experience, and 9 months of additional training, the candidate becomes qualified as a senior technician.

Sanitarians - a 1-year course, which continues to be given at the Gondar Public Health College.

Pharmacists - a university curriculum that formerly required 4.5 years and is now reduced to 4 years.

Pharmacy technicians - formerly trained in a hospital-based 2-year course; now integrated with university training of pharmacists in a 2.5-year course.

Physicians - formerly a university programme of 7 years (2 years premedical and 5 years medical); from 1964 to 1976, only 113 physicians had been graduated. The curriculum has now been reduced to 5 years (1 year premedical and 4 years medical) with the output expected to become 120 graduates per year. The new medical curriculum will attempt to integrate basic and clinical sciences, and to emphasize community health throughout all 5 years - including 12-weeks' field experience. Undergraduate medical training has also been started at the Gondar College.

Postgraduate education of physicians in Ethiopia is just beginning. Continuing education i offered for upgrading dressers to become health assistants.

Regarding health manpower management, a major problem is the geographic maldistributio of physicians, and other health personnel. In the three largest cities, with 6% of th national population, there are located 69% of the physicians, 76% of the laboratory tech nicians, 80% of the pharmacists, and 60% of the nurses.

There is also inappropriate use of health personnel (e.g. administrative work being don by sanitarians). State-employed specialists in medicine sometimes see private patient during official hours. Because salaries are low and working conditions poor, many allie health personnel abandon health work after being trained. The health teams produced by th Gondar school, although a big step forward, functioned poorly. Supervision was weak an community participation lacking. Some health officers eventually entered medical school and the others became rural clinicians, doing little public health work.

It is hoped that the new government programme will recapture the original Gondar publi health spirit, under the pyramidal health service structure of six levels, as described above

WHO relations. The persons interviewed spoke favourably of the value of WHO fellowships, o the WHO collaboration in establishing the Gondar Public Health College in 1954, and of th help in strengthening the medical school in 1964 and later. The Gondar school emphasize rural needs, a preventive orientation, and the health team concept - producing an initia (though small) cadre of trained health personnel.

The major influence of WHO's HMD programme, however, has been regarded as conceptual, stressing the importance of health manpower planning and training, the value of teacher- training, and especially of the integration of health services and health manpower develop- ment. The Alma-Ata Conference in 1978 had a distinct influence on Ethiopia's plan to trai community health agents to provide primary health care at the village level.

Further WHO collaboration is needed to stimulate improvements in the career structure of health personnel, to extend continuing education, and to strengthen personnel management (utilization); it is needed also for the training of health planners and for generally stimulating the output of greater numbers of all types of health personnel. There is also a desire for further fellowships, consultants (particularly short-term), workshops (especially if they can be held in Africa), and the provision of medical equipment and vehicles. The principal criticism of WHO work concerned bureaucracy in the administration of fellowships and consultancies.

The main impression derived from the field study of Ethiopia is the strong emphasis being given to planning and to the development of an organized and expanded national health system. A crucial aspect of this planning is accelerated training of several types of health person- nel to work in teams to cover the entire population. Improved geographic coverage is evidently expected to result from the output of greater numbers of physicians, health assistants, community health workers, and others.

Indonesia

This large nation of some 13 000 islands in South-East Asia - the most heavily populated being Java - has a population of more than 143 000 000, as of 1978. It is mainly agricul- tural, but has resources also in crude oil, minerals, rubber, and other products.

Background. Independence after two centuries of colonial rule was achieved by Indonesia in 1949, following Japanese occupation and four years of liberation struggle. The socio- economic situation of this developing, non-aligned nation, favours private market enterprise.

HMD Process. Plans for a national health centres programme were started in Indonesia about 1969-1970. Norms were established for physicians and other health personnel to staff these facilities in relation to the populations to be served. In the Ministry of Health there is a Planning Bureau and a Centre for Education and Training of Health Personnel. A third body

oncerned with medical and dental education is the Consortium of Health Sciences, which was stablished by the Government, under the Directorate-General of Higher Education, within the inistry of Education and Culture; it is made up of the deans of medicine and dentistry ided by a full-time secretariat.

Peripheral health units in the provinces submit estimates of their needs to the Ministry f Health, where the Planning Bureau compiles figures on nationwide requirements. In recent ears, however, the number of physicians trained have, in fact, been greater than the overnment health system could absorb, although the output of nurses has been reduced during he last three years due to the reorganization of the nursing and midwifery educational ystem. However, even with the decreased number of graduates, there are not enough posts at resent to absorb all the graduates.

Inability of the government health services to absorb personnel is due partly to a policy equiring financial support of health services from the provinces as well as from the inistry of Health. Provincial governments, in turn, receive grants from the Ministry of he Interior, but this money must support numerous local services. Furthermore, as stated y the field investigators, the unplanned but critically important private sector are largely esponsible for the major problems of the Indonesian health system. This sector is composed in part of purely private medical practitioners, pharmacists, and others who engage in rivate practice, but principally of government health personnel doing remunerative work in their free time; the latter is allowed because official salaries are admittedly low - a vicious circle, in a sense, in that the low salary scale is accepted because it may be supplemented by private earnings. To cope with these problems, a special Manpower Planning and Development Group has recently been set up in the Ministry of Health; it is exploring ways to achieve closer relationships with the Ministry of Education.

With regard to health manpower production, the training of physicians, dentists, and pharmacists is done principally in univer- sities, which are supervised by the Ministry of Education. Other allied health personnel are produced by the Centre for Education and Training in the Ministry of Health. This centre operates schools for training nurses and allied health workers.

There are 25 schools of medicine, of which 13 are governmental and 12 are private. The public medical schools graduate 1300 physicians per year, and the private ones only about 200. There are mixed sponsorships also in other university-level training institutions: in dentistry, 6 public schools and 2 private ones with an aggregate output of 240 dentists a year; in pharmacy, a combined total of 6 schools graduating 210 pharmacists a year.

Training in the public professional schools is largely government-financed, but there are annual entrance fees that must be paid privately. In all professional schools, moreover, students must purchase textbooks and also bear the living costs of any field studies required.

The curriculum in all the medical schools is designed on the classical European model, requiring 7 years of basic science and clinical studies. At the same time, faculties are attempting to respond to a national call for community-oriented medical graduates. The Consortium of Health Sciences is pressing for a balance between the clinical sciences and a community orientation, but this seems to be difficult to achieve.

Community medicine is taught mainly in connexion with the delivery of primary health care at the local level. The teaching is impaired, however, by the weak links between this level and the next higher levels of intermediate care (health centres and small hospitals) and specialized care (larger hospitals). Medical faculties are responsible to the Ministry of Education, while health facility personnel come under the Ministry of Health; this adds to the problems.

In government-owned schools, of which there are 103, the education of nurses and allied personnel is fully government-subsidized.

There are 98 privately-owned schools which receive partial aid from the government; of these, 65 are schools of nursing. In addition, there are 15 nursing schools operated and owned by the military. There are many applicants, particularly in nursing, but the output is not adequate to meet the numbers requested by the health services, both community and hospital. The present basic educational programmes in nursing are of two types, both of

which are three years in length. The "health nurse" programme takes in graduates of the junior high school (9 years) and the Academy of Nursing programme admits graduates of senior high school (11 years). The University of Indonesia plans to start a generic baccalaureate programme in nursing in 1982. Since 1975, the 24 different types of nursing and midwifery training programmes have been reduced to the two types mentioned.

The training of auxiliary nursing and midwifery manpower has been discontinued, except in Irian Jaya. The modifications in nursing education aim at preparing all nursing manpower to be able to carry out specific tasks in community health work as well as in hospitals. This goal includes the retraining of graduates of the old programmes to provide them with competencies equivalent to that of the graduates of the new programmes.

Regarding health manpower management, as noted above, the number of government posts is not sufficient to absorb the approximately 1500 medical graduates each year. The Ministry of health budget has been providing for only about 800 new positions annually; since a period of public service is required (usually 3-5 years) before medical licensure, the balance of 500 medical graduates have to wait until an official post opens up. The national network of health centres, noted earlier, is supposed to provide the necessary posts eventually, but they do not as yet. Perhaps it is encouraging that 50% of physicians posted in the currently established health centres want to stay on - although an important reason is the opportunity they find for private practice (and even other forms of private business) in the same community. In any event, many more health centres are needed to achieve population coverage for health services. A number of the graduates are also employed by other ministries.

The community health promoters, replacing assistant nurses since 1978, have not yet been trained in significant numbers; this training is done in health centres. In rural districts there is a great need for continuing education which has not yet been met. The problem most frequently reported in health manpower management is the strong attraction of private practice to government physicians, both in cities and rural areas; this means that after official working hours, medical service is rarely available at the health centres.

WHO relations. The major impacts of WHO on the HMD process in Indonesia, according to national observers, has been in policy formulation. The decision in 1978 to train community health promoters was essentially an outcome of the Alma Ata Conference. WHO has also collaborated with Indonesia in the strengthening of its medical schools, in conveying an appreciation of teacher-training, in various workshops on selected subjects, and in provision of teaching equipment and materials. Respondents in the country field study were not aware of any special impact of Indonesia on WHO policy formulation.

WHO fellowships are especially popular, even though they entail several problems. English language requirements are often a barrier (particularly for nurses). The candidate hesitates to learn the language without knowing whether he or she will be chosen for a fellowship; yet a knowledge of the English language is required for the initial application. There are also complaints about lengthy bureaucratic procedures, inadequate stipends, and the unsuitability of some of the training to Indonesian needs. It is interesting to note that most fellowships are wanted for study within Indonesia.

Workshops have been appreciated when they have been short and on appropriate subjects (which is not always the case). Training programmes on health service management are particularly desired. WHO, it was stated, should also help Indonesia in obtaining assistance from UNICEF, the World Bank, and other international agencies.

Over the years, Indonesia has, indeed, been able to train greatly increased supplies of health personnel. Physician resources have been increased so that the ratio of physicians to population improved from 1 : 66 000 in 1952 to 1 : 14 900 in 1976. Likewise the nurse supply improved over the same period, from a ratio of 1 : 12 800 to one of 1 : 5400. Yet, as noted, there are serious disparities between the production of physicians and nurses and their utilization in the public services. The major difficulty seems to be inadequate financing of the public sector of health care, side-by-side with a large and flourishing private sector. Private earnings by physicians aggravate inequities in several ways. Not only do private services go only to the minority of people who can afford to pay for them, but the opportunity for private earnings reduces pressure on the government, in a sense, to

ay higher salaries for work in government health services. Even teaching in medical chools is impaired by the fact that the interest and attention of most of the teachers are iverted by their private practice. These problems are evidently well recognized by ersonnel in the Indonesian Ministry of Health.

Malaysia

This mainly peninsular nation in South-east Asia has a population of about 13 000 000. While largely agricultural, it has substantial resources in tin and rubber.

Background. In 1957, Malaya became independent from colonial rule, and later was combined with North Borneo (Sabah) and Sarawak to become Malaysia in 1963. In 1965, the islandstate of Singapore broke away as a separate nation.

HMD process. Even before national independence and the formation of Malaysia, general socioeconomic planning, including health planning had begun in this country. As part of the Rural Health Services Scheme, started in 1953, a programme for training auxiliary nurses, sanitarians, and midwives was planned and implemented to staff the rural health facilities. In the Ministry of Health, as in all the ministries, there has been a Planning Committee, designing five-year plans. Formal five-year planning had started in Malaya in the 1950s (while still a British colony), and the first Malaysian five-year plan began in 1966. The country is now into its fourth five-year plan (1981-1985), so that the concept of health manpower planning has become fully accepted.

The initial goals of the rural health programme called for one physician, stationed at a main health centre, to serve a population of 50 000. The surrounding sub-health centres, each serving 10 000 people, would be staffed by various auxiliary personnel, and the most peripheral units - midwife clinics - were to be staffed by assistant midwives. As more personnel were trained (see below), the standards of service and staffing were raised. Both types of health centre are now to be staffed by physicians and others, and the peripheral units (formerly midwife clinics) have been broadened in scope by training the assistant midwives and other auxiliaries to provide general primary care. This conversion of the Rural Health Services Scheme from a three-tier to a two-tier system took place in 1973. Each health centre staffed by a physician is now expected to serve a smaller population of 15 000 to 20 000.

In the fourth five-year plan (1981-1985), no further acceleration of health manpower output is planned, since the network of health facilities - except in Eastern Malaysia (Sabah and Sarawak) - is not expanding rapidly enough to absorb all the personnel being trained. Many personnel, especially physicians, are therefore being lost to the private sector. The major health manpower emphasis of the fourth five-year plan is on continuing education and management training. It is also planned to accelerate the geographic coverage of Eastern Malaysia, by the use of mobile health teams with community health aides. More attention will be paid also to the potential use of traditional healers in all three major Malaysian ethnic groups - the Malay bomohs, the Indian Ayurvedic physicians, and the Chinese traditional medical practitioners. About 50% of the population of Eastern Malaysia remains still to be covered, although in Western Malaysia only 3-5% of the people do not have access to primary care.

To coordinate manpower training with the development of personnel in all sectors of Malaysia, the Prime Minister's Office has recently set up a Manpower Development Board. Inter alia, this Board is expected to coordinate the production of physicians and other professional health personnel by the universities, under the Ministry of Education, with the health service requirements of the Ministry of Health. When the output of the medical schools reaches 450 physicians per year, it is expected that the personnel losses to private practice will have peaked and the needs of the public sector will be met.

Regarding health manpower production, the training of rural auxiliary health workers since 1953 has already been mentioned. Since the restructuring of the rural health programme in 1973, Malaysia has had the special task of broadening the capabilities of the trained assistant midwives to include general primary health care, and also of training new auxiliaries for this wider role. Each of these primary health care workers is supposed to serve about 2000 people.

Since 1966 other allied health personnel have been trained at the Public Health Institute in Kuala Lumpur, the national capital. This school, under the Ministry of Health, trains public health inspectors (sanitarians), public health nurses, and health education officers - turning out about 120 of these personnel per year. These are all postbasic courses. Basic nursing, for example, is taught in a 3-year curriculum at 8 hospital-based schools, all under the Ministry of Health. Also under the wing of the Ministry is the renowned Malaysian Institute of Medical Research, functioning since 1905; the IMR trains laboratory technologists and has recently expanded its activities to produce 120 medical technicians and 120 laboratory assistants per year. The training of all allied health personnel by institutions under the Ministry of Health, is quite appropriately suited to the needs of the Ministry's health services; it is planned and monitored by the Training and Manpower Division of the Ministry.

With respect to the preparation of physicians, which comes under the Ministry of Education, adaptation of the output to the requirements of the health services has not yet been achieved. There are now two university medical schools. Together, both schools now graduate 190 physicians per year, and additional Malaysian students go to medical school abroad (Singapore, Australia, and elsewhere) - returning to Malaysia along with other foreign medical graduates. A third medical school will be opened at the university in Penang in 1981, and soon after this it is expected that about 500 physicians per year will enter the health sector in Malaysia. This number is larger than the requirements of the public side of the Malaysian health system but, as noted above, it is needed to compensate for the steady losses of physicians into private medical practice. The law requires that all physicians licensed in Malaysia since about 1970 must work for 3 years in the Government services, and those whose education was Government-sponsored (about 75%) for an additional 4 years. After these periods are over, however, most of these physicians go into private practice, which is much more lucrative.

The medical school curriculum in Malaysia is relatively conventional, with 1 year of premedical basic sciences, 2 years of preclinical science (anatomy, physiology, etc.), and 3 years of clinical work. There is a limited degree of teaching that integrates the preclinical and clinical disciplines. At the University of Malaya, community medicine is taught in each of the last 4 years; it consists of epidemiology, biostatistics, behavioural science, nutrition, maternal and child health, demography, and medical sociology. A period of several weeks is spent on a field placement in a rural health centre, where a research project is also carried out. It is expected that a similar progamme of community medicine will soon be introduced at the National University Medical School.

Postgraduate medical education is offered at the University of Malaya, but it is not well developed for general practitioners, who constitute the great majority of private physicians. Specialists are almost all in government posts, since (as in the British Commonwealth generally) they are mainly hospital-based and almost all hospitals are public. In 1975, the University of Malaya started a postgraduate public health programme leading to the MPH degree. The plan is to train enough district medical officers capable of administering all services in their districts, including the hospitals; at present, their administrative duties are limited to the preventive services.

Regarding health manpower management, the staffing of rural health centres and peripheral clinics has made substantial progress in the last decade. At almost all health centres - both the main centres and the former sub-health centres - there are now a physician, a dentist, a hospital assistant (the Malaysian term for a multipurpose health auxiliary who treats common ailments), a drug dispenser, and a laboratory assistant. These personnel provide medical care. For preventive work there are a health sister (graduate nurse), a midwife, assistant nurses, a public health inspector (sanitarian), overseers (assistant sanitarians), and labourers. The midwife clinics, as noted, are being broadened to become general primary health care units; the training of community health aides is also being considered to foster greater community participation in the management and use of these clinics.

The major problem in health manpower utilization, as already suggested, is the loss of so many physicians to private practice after their official obligations have been met. This internal brain drain is more serious than the external brain drain to the United Kingdom, made possible by the British recognition of Malaysian medical degrees. As the cities become saturated with private medical practitioners, some of these leave to settle in small rural

towns and villages. While this has its value, of course, the fact remains that only a minority of rural people can afford to pay for private medical care. Yet about 50% of all Malaysian physicians are now entering private general practice. Accepting this reality, the University of Malaya Medical School is establishing an academic Department of General Practice. At the same time, the expectations of the people for improved specialty services in the smaller district hospitals are rising.

WHO relations. Malaysian health leaders speak very positively of the collaboration with WHO. In the Rural Health Services Scheme - the nation's major health activity for extending coverage to the entire population - WHO consultation was involved from the beginning in 1953. Every few years, further cooperation was solicited and offered, and in 1968 a major 15-year review of the programme was carried out by WHO. This review found substantial progress in rural health services and advised continued WHO cooperation, with certain administrative changes - such as a broadened scope of functions at the midwife clinics and a mandatory period of service for Malaysian medical graduates in order to get posted to the sub-health centres. During 1969-1971, further studies were made by the Malaysian Ministry of Health, in cooperation with WHO, leading to the implementation of these and other changes. By 1980, in the modified two-tier framework of the rural health system, facilities had expanded to 324 health centres and 1393 community clinics. Not all of these were fully staffed with the requisite personnel, but progress towards this goal was being made rapidly.

WHO fellowships were also assessed very affirmatively, and were considered particularly valuable for advanced training of medical school teachers. During the course of interviews, it was stated that with the task of building up 3 medical schools, long-term WHO consultants would be valuable. Additional workshops for continuing education were also recommended. Collaboration on health services research was also advocated, particularly to help solve problems in the management of the health system. None of the persons interviewed could comment on any impacts of Malaysia on WHO.

All in all, Malaysia appears to be a country making rapid progress in the development of health manpower responsive to the requirements of its health services. Health manpower planning has long been accepted and is actively pursued. Manpower production is proceeding systematically for both professional and auxiliary health personnel. The most vexed problems relate to manpower utilization, particularly because of the substantial and continued departure of physicians from the public to the private sector. The bulk of this internal brain drain is into general practice in the cities; urban family incomes seem to be sufficiently high to provide a fairly large market for these practitioners, so that the inequities caused by this urban private sector are probably not great. In the rural areas, traditional medicine is still a major resource of health care (especially for low-income families), but the medical and auxiliary staffing of the network of facilities in the Rural Health Services Scheme is steadily becoming strengthened. Full population coverage with primary health care is expected to be attained in Western Malaysia by about 1985. Improvements are also being achieved in the staffing of district hospitals providing secondary care. In the less developed areas of Eastern Malaysia, progress is slower and full population coverage will doubtless take longer.

Gabon

As shown in Table 7, Gabon, with a population of only 534 000 inhabitants, according to the 1977 estimate, has by far the highest GNP *per capita* of any of the six countries studied but is rather low according to the two other criteria of development. This paradoxical situation is explained by the recent discovery of large reserves of crude oil in the country.

Background. Up to 1959 Gabon was part of French Equatorial Africa. Independence was achieved in 1960, and its political regime has since been one of the most stable in Africa. Large foreign investments were made after the discovery of oil around 1970. The Government is oriented towards private enterprise in most fields.

HMD process. Health planning began in 1965 with the publication of the "Plan quindécennal" (1966-1980) for health services development. Then, the Ministry of Economic Development and Planning established three-year plans, in collaboration with the Ministry of Health.

For health manpower production, the principal resource in Gabon is the Ecole nationale de Santé et d'Action sociale (ENSAS). This major centre for training health personnel was established in 1962, soon after national independence. With only 31 teachers, however, ENSAS is still staffed below the level necessary to meet the demand for its graduates. It is under the supervision of the Ministry of Health.

In 1974, the Centre universitaire des Sciences de Santé, (CUSS) was founded under the Ministry of Education; it offers a 7-year curriculum for training physicians, and its initial class was due to graduate in 1981. The school was supposed to have been modelled after the multiprofessional University Centre for Health Sciences at Yaoundé, (United Republic of Cameroon), with the objective of training personnel to meet local health realities. It is not clear, however, if its training programme will permit it to reach its objective; the medical curriculum was based largely on the advice of foreign consultants, with a rather conventional programme: 4 years of theoretical studies followed by 3 years of practical work. The teachers are mainly expatriates. It is expected that courses will soon be developed for nurse-anaesthetists, midwives, and laboratory technicians - to permit team teaching.

Regarding health manpower management, there are currently 206 physicians in Gabon, almost all located in the capital, Libreville. Of these, 135 are employed in the public sector (although engaged also in some private practice) and 71 are entirely in the private sector. Similarly, there are 35 pharmacists, of whom 13 are entirely private. Of the 18 dentists, 10 are in public employment and 8 are wholly in private practice. The nurses and other allied personnel who have been trained at ENSAS are bound to work for 10 years in the Government service.

Large industries in Gabon are required by the Government to provide general health care (i.e., more than occupational health services) for their employees and their families. Companies do this either by engaging their own medical staff or by sending their people to private medical offices. Recently there has also been developed a social security scheme, which is expected to provide general medical care to government employees and other groups through its own medical staff.

Major problems in the governmental health services of Gabon relate to a weak organizational structure for supervision. There is also no continuing education. On the other hand, with the comparative wealth of this country, physicians and other professionals are attracted from elsewhere, and there is little if any out-migration. There are internal losses from the public sector of health care to the private sector, however; even though governmental salaries are relatively high, earnings in the private sector are even higher.

WHO relations. Over the last 30 years, these relations can be described in three phases. In the decade 1950-1960, Gabon was still a colony. No health personnel were trained locally. "Médecins Africains" (the equivalent of medical assistants) were prepared in Dakar (Senegal). Nurses were trained in Brazzaville and Ayos - cities also outside the territory. In this period WHO played no direct role.

The years 1960-1970 were the first decade of national independence. With support from WHO fellowships, a few of Gabon's young people studied medicine in Quebec or France; some remained abroad. The Plan quinquennal for the development of health services was established in collaboration with WHO and permitted initial programming of the needs and of training programmes for health personnel. Then WHO consultants advised on the development of training programmes for nurses and midwives at ENSAS.

The decade 1970-1980 brought the discovery of oil and other minerals, launching the so-called "economic miracle" of Gabon. The CUSS was started, the ENSAS was expanded, and programmes were developed in maternal and child health care, communicable disease control and other health fields. Problems of coordination between CUSS and ENSAS, and between both of these training programmes and the country's health service needs have still to be worked out. The WHO emphasis on promoting primary health care, however, is accepted in principle, and Gabon looks to WHO for collaboration in solving the many problems in its health system.

Gabon, in summary, presents a picture of a country which still has to face up to its sudden wealth. With major foreign investment, its great natural resources have been rapidly exploited, but the country has yet to develop an infrastructure of educational and health

services to bring corresponding benefits to its people. As an independent nation, Gabon is still young, but with proper planning, a strong political commitment to its espoused goals, and hard work, its future in health and many other sectors could be among the brightest in Africa.

Costa Rica

This small Central American republic of 2 100 000 population (1978), became independent in 1821. It is predominantly agricultural - coffee and bananas being its major exports - but, unlike its neighbours, is composed mainly of small family-size farms rather than large plantations.

Background. Since a civil war in (in 1948-1949), Costa Rica has had democratically elected governments and political stability. It is one of the few nations in the world that has only a domestic police force and no standing military establishment. In the health sector, like most Latin American countries, it launched a social security programme providing medical care to employed workers and their families; this was in 1943. In 1975, all hospitals were brought under the social security programme, while all preventive services and other functions were kept under the Ministry of Health. Some 95% of the population is entitled to publicly financed medical care. Nevertheless, the overall health system remains fragmented, with services provided by: (1) the Ministry of Health, (2) the social security programme (CCSS), (3) a national water and sewage-disposal organization, (4) a private medical care sector, and (5) several semi-autonomous institutes dealing with alcoholism, malnutrition, industrial injury insurance, and other problems. Currently the largest number of health personnel are in the social security programme (20 000), with another 3000 in the Ministry of Health, and 5200 in other organized entities - for a total of 28 200.

HMD process. Largely because of the fragmentation of health responsibilities just noted, health planning in Costa Rica has not been comprehensive. In the Ministry of Health there is a health planning unit which relates to an overall National Office of Planning; this unit has done planning, however, only for the programmes of the Ministry itself. Within this limitation, sophisticated planning methods were developed in theory, but it was not possible to apply them (see Chapter IX on the planning objective and the difficulties with the PAHO-CENDES methodology).

With the major reorganization of health activities effected in 1975 (all treatment facilities and services assigned to the CCSS and all prevention services to the Ministry of Health) pressures developed for a stronger and broadened scope of health planning. Many of the older hospitals that had transferred from the Ministry to the CCSS required upgrading, and costs rose sharply. There were also signs of an over-production of physicians (see below). To cope with these problems, in 1979 the President established a National Health Council, representing all the major health entities as well as the University, for the purpose of coordinating the divers health programmes.

In the late 1960s, the Ministry of Health planning unit had put forward a rather traditional plan for gradual extension of the Ministry's services during the decade 1970-1980. In the early 1970s, however, certain events occurred which led to a sweeping revision of this plan in 1974. The new plan called for total population coverage with health services by 1980. The events leading to this much more ambitious health plan may be briefly summarized.

First there was the "San Ramon Experience". In 1950, a young physician had been posted for his rural social service to the town of San Ramon. He left in 1952 but returned in 1954 as director of the local hospital. From this position, he had the authority to stimulate the organization of several local health stations in nearby villages; these stations were staffed with health auxiliaries who had received very brief training at the hospital. Between 1955 and 1970 10 of these stations had been established. The auxiliaries also made home visits to give vaccinations and advise on sanitation. The innovative San Ramon physician then submitted a proposal to the Ministry of Health for an extension of his idea throughout Costa Rica; the response was an agreement in theory but no financial support. He approached the CCSS, with similar negative results. Then he managed to get his proposal submitted directly to the Congress, and money was finally provided to the Ministry of Health

for extension of the San Ramon idea. Help was obtained also from UNICEF. By 1978, th country was blanketed with 307 primary health care posts. Opposition to the whole concept which had come initially from the medical profession and pharmaceutical companies, change rapidly, and particularly physicians and nurses supported the programme from its inception i 1974.

Beyond these events leading to extension of primary health care throughout Costa Rica, substantial contribution to health planning was made by the integration of the CCSS an Ministry of Health programmes in 1975. The combined network of hospitals included 1 facilities, along with the ambulatory treatment clinics. These resources were estimated t be making physician's care accessible to 95% of the population (87% being employed person and their families, plus 8% indigents). The remaining 5% of people are selfemploye families using the private health sector.

With all these developments, one can appreciate why around 1974 the health planning goa for the decade was changed to the attainment of total coverage of the Costa Rican populatio by health services by 1980. This success story should not, however, obscure the fact tha many problems remain. The administrative structure of the Ministry of Health, with its preventive services, divides Costa Rica into 5 regions, while the social security treatment programme has 7 regions. More important, there is still inadequate coordination between the Ministry's preventively oriented health centres and the CCSS ambulatory treatment clinics. The new National Health Council is expected to tackle these problems. If it succeeds, such coordination should contribute also to more effective health manpower planning. The urgent need for this planning is manifest when considering Costa Rica's many activities for the training of health personnel.

Health manpower production in Costa Rica has been a robust process, but lacking in central or coordinated planning. A medical school was established at the University of Costa Rica in 1959 with 150-180 new students each year. In 1976, therefore, a second medical school was organized under purely private auspices; the faculty is composed entirely of private medical practitioners. The first class is expected to be graduated from this school in 1981, with 50-60 new physicians. In addition to the output of these two medical schools, another 30 - 50 Costa Rican students attend medical schools abroad and then return home. In 1981, between 230 and 290 additional physicians will enter the health scene in Costa Rica - a number much greater than the system can absorb.

Postgraduate medical work in Costa Rica is offered as residencies in the CCSS hospitals. Occasional continuing education sessions are sponsored by the Costa Rican Medical Association at the expense of drug companies.

A school of nursing has been functioning in Costa Rica since 1917 and, after several changes, the hospital-based 3-year nursing course was reinstated in 1971.

There is a shortage of professional nurses in Costa Rica - a total of only 762, half of the number of physicians. To compensate for this shortage, a much larger supply of nursing auxiliaries has been trained directly by the Ministry of Health since 1954. A 9-month course for these auxiliaries was offered by the Ministry each year, until it was terminated for lack of funds in 1979. In 1972, however, a similar course for nursing auxiliaries was started by the CCSS. Unlike practices in other countries, candidates for this training must be secondary school graduates. At first these auxiliaries were prepared essentially for hospital work, but in 1973 an additional month of training in rural health was added, and these women now serve also in rural posts. Altogether there are about 2760 nursing auxiliaries. Although their salaries and social status are relatively low, they are obviously an important personnel resource.

Several other types of health personnel are trained by the Ministry of Health. Sanitary inspectors are trained in a 9-month course. Laboratory technicians and nutritionists (perhaps dietitians would be more accurate) are also produced. The latter staff some 600 centres for education and nutrition of malnourished children in the 1-6-year age group.

Since 1974, health assistants on the San Ramon model have been trained by the Ministry of Health to provide primary care at rural posts. These are all secondary-school graduates, but the course requires only 4 months. To draw the attention of local people to the rural

sts, health aides or responsables are also trained in a 4-day period. In 1967, limited aining was started for traditional birth attendants (TBAs); after 500 had been trained is effort was stopped. TBA-attended childbirths are now down to 12% of the total.

Regarding health manpower management in Costa Rica, reference has already been made to e imminent (or already present) surplus of physicians. Because of the saturation of the ties, many of the young physicians sent for social service to a rural post decide to stay . This, of course, helps achieve amore balanced geographic distribution of physicians, lthough there is naturally greater concentration in San José, the national capital. For xample, there are now (in 1980) 25 paediatricians outside the capital; there were only 5 in 975.

Because of the very broad population coverage by the CCSS and Ministry of Health pro-rammes, there is only a rather small market left in Costa Rica for private medical practice. his is in striking contrast to some other countries visited in this study. Few physicians re exclusively in private practice, although about half of the CCSS physicians spend some ime in such practice. Within the CCSS facilities, there is a relative surplus of specia-ists (some having done postgraduate study abroad), so that many of them are doing work more ppropriate to general practitioners. Because so many CCSS physicians are hospital-riented, when they are stationed in ambulatory care clinics their work seldom has a proper ommunity orientation. Also, clinic nurses sometimes work as secretaries under exceptional ircumstances.

When the CCSS and Ministry of Health programmes were integrated in 1975, steps were taken o make the salary scales equivalent. Uniformity has not yet been achieved, however, and ersonnel in the Ministry facilities are still at a disadvantage. Public health physicians re particularly poorly paid, so that they often abandon this work. Sanitarians are also oorly paid in the government service, and many of them leave for private jobs.

In the health centres of the Ministry of Health, there is talk about "teams", but per-onnel relationships are often said to be poor. Relationships between professional nurses nd nursing auxiliaries are frequently strained. The latter would prefer to work under hysicians, although this may basically reflect the lack of preparation of nurses in the kills of supervision and teamwork.

HO relations. Reference has already been made to WHO collaboration with Costa Rica in the ield of health planning, which was not very successful. In the field of nurse training, dvice given by WHO led to upgrading the entrance requirements and to extending the length of he curriculum; in the light of the eventual shortage in professional nurses, this advice ay not have been the best. On the other hand, the very useful programme for training ursing auxiliaries, started in 1954, was also launched with the advice of WHO consultants. n the early days of the University medical school, WHO was likewise helpful.

Probably the major impact of WHO on Costa Rican health manpower policy came through a 972 meeting in Santiago, Chile, which catalysed the change in the Ministry of Health goal or 1980 towards an emphasis on primary health care through the use of briefly trained uxiliaries (known in this country as the "San Ramon model"). Advisers from WHO worked side y side with staff from the Ministry of Health in the planning and development of the rural ealth programme and later of the community health programme. Later, at the 1978 Conference f Alma Ata, Costa Rican leaders were inspired by the goal of "health for all" through rimary care.

Good use has been made of WHO fellowships, although there are many criticisms of the engthy administrative processes involved in arranging them. Some of the overseas training rovided, it was said, has been inappropriate to Costa Rica's needs. A preference was xpressed for bringing expert consultants to Costa Rica. In fact, of all WHO money spent or Costa Rica in recent years, 75% has been on consultants, only 21% on fellowships, and 4% n equipment.

No one interviewed in this country was aware of how Costa Rica may have influenced WHO. For the future, it was thought that WHO should hold more workshops in the field of health service management. WHO has been helpful sometimes in impressing upon the Government the asic importance of the health sector. More of this type of influence is wanted.

Costa Rica, in summary, is a small but relatively prosperous Latin American country wi remarkable political stability since its civil war ended in 1949. Its democratic parli mentary structure, the absence of military forces, and its pattern of widely distributed la ownership impart to the country a strong orientation to social welfare.

Since about 1970, the gradual extension of a network of rural posts, where healt auxiliaries provide primary health care, has been impressive. Combined with the coordina tion in 1975 of the Ministry of Health and social security programmes, this has led t coverage of virtually the entire population with health services.

Nevertheless, the pluralistic structure of the health system leaves several problem unresolved. In spite of the formal coordination between the Ministry of Health and th social security programme, there is still a wasteful dichotomy in the delivery of preventiv and curative services. With respect to health manpower, planning has been inadequate, wit little relationship between estimates of need and the numbers and types of manpower produced There are evident surpluses of some types of personnel (e.g., physicians) in relation to th health system's requirements, and shortages of other types (e.g., nurses). The Universit has been staunchly autonomous and unresponsive to objective health manpower needs.

While important health indices (e.g., infant mortality and communicable disease rates have shown great progress, the need is now felt for more attention to geriatrics and chroni disorders. Much more careful planning of health manpower is wanted, with adaptation o manpower production to the needs of the health services. On the training of healt auxiliaries, nurses, and other personnel, there are calls for more perceptive evaluation.

Barbados

This small attractive island in the Caribbean has an estimated 1980 population o 260 000. Although its major economic base for many years was sugar production, in recen times its principal income has been derived from tourism.

Background After more than 300 years of colonial rule, independence was granted in 1966. As shown in Table 7, there is a remarkably high rate of literacy (nearly 100%), and a long life expectancy, which accounts largely for Barbados having the highest index of development among the six countries studied. In 1976, the Barbados Labour Party was elected to power, replacing a party which had ruled during the country's first ten years of independence. Among other things, the Labour Party pledged to introduce a national health service, for which the planning has played a central role in health affairs.

HMD process. After independence, health planning in the Ministry of Health was conducted through a Planning and Priorities Committee, chaired by the Minister; some of this Committee's ideas were utilized in Caribbean regional planning through the Caribbean Community Secretariat (CARICOM). In 1978, a major change occurred in the general health planning process, and in health manpower planning in particular. In the Ministry of Health a Project Design and Implementation Unit (PDIU) was organized to undertake the planning of the national health service which the Barbados Labour Party had pledged in its manifesto to bring about. Prior to the establishment of the PDIU, health planning in the Ministry had been essentially pragmatic and short-term, intended to respond to the needs of the Ministry, including the principal hospitals on the island, a number of health centres, and all preven- tive services. However, the private sector, which provided most of the primary care - including services from private general practitioners and pharmacies - maintained a somewhat distant relationship with the public health sector. A stronger linkage is now forged between the public and private sectors through the implementation of the national health service.

Health planning for the national health service (NHS) thus requires the consideration of all Barbadian resources, public and private. While secondary and tertiary care were quite well organized, primary care in Barbados was very fragmented; it was given not only by general practitioners for private fees, but also at the Casualty Department of the large Queen Elizabeth Hospital (without charge), at government health centres (prevention only), and in other ways. The NHS plan tentatively adopted calls for coverage of the island with an array of primary care teams made up of a physician, two nurses, and a clerk) to be

veloped at the sites of general practices, health centres, and newly constructed poly-inics. Every resident would be entitled to obtain integrated primary health care from one these teams. Staffing the teams, however, would require some increase in the supply of eneral practitioners and additional training for community nurses.

Regarding health manpower production, Barbados physicians have been trained mainly at the niversity of the West Indies (UWI), with its principal medical school campus in Kingston, amaica. This school has essentially emulated the British model, requiring 6 years since 978 (before then 5.5 years). The first year offers preclinical sciences, the next 3 years re for clinical studies, and the last 2 years are for clinical internship in a hospital. he internship years may be taken in Barbados (at the Queen Elizabeth Hospital), and every ear 20 or 30 of the 100 entering medical students do so; these include 8-10 Barbadians. ost of these students have scholarships, and the Government of Barbados may require service rom them in the public system (if there are positions to be filled), on the basis of one ear of service for each year of scholarship support.

The Department of Preventive and Social Medicine at UWI is quite strong, and offers nstruction in each of the first 4 years (in Jamaica). The third and fourth include field isits to public health facilities and a period of work in a Jamaican village. Postgraduate esidencies for specialty training are offered at the public hospitals in Jamaica, Barbados, r Trinidad. Limited continuing education for all physicians in Barbados is offered by the WI in three half-day symposia each year.

Since 1927 nurses have been trained in Barbados at a hospital-based school, under the upervision of the Ministry of Health, which operates the hospital. Evidently more nurses ere trained than could be employed by either the hospitals (including one private facility nd several district hospitals for long-term patients) or the public health programme, ecause some are unemployed or underemployed. There is no tuition, and five applications re received for every place in the nursing school. This is no doubt related to the large umber of secondary school graduates (virtually 100% of the young men and women).

In 1978, a decision was made to transfer the nursing school from the hospital setting to he new Barbados Community College, under the Ministry of Education, but this matter has not et been finalized. This college also trains laboratory technicians and other allied health ersonnel. Since 1975, public health inspectors have been trained in the Ministry of Health hrough a 2-year course at the Barbados Community College.

Nursing assistants have been trained at the Queen Elizabeth Hospital (a 1-year course) since 1970; about 40 per year had been turned out, but this has now been reduced to 20. Postbasic nursing qualifications may be earned in midwifery and in psychiatric nursing.

Regarding health manpower management and utilization, the problems of fragmented delivery of primary care and the misuse of the hospital casualty department were noted above. As a small island, Barbados has no significant problem of physician maldistribution; almost all points can be reached by road within a half-hour. Primary care, as noted, is provided mainly by private general practitioners, but some of them also work part-time for the Ministry of Health, staffing district clinics for the indigent. Another problem of misuse pertains to the engagement in part-time private practice of most of the salaried hospital specialists; a substantial share of patients seen in these private offices (including a few multi-specialty group practices) have ailments that are more appropriate for a general practitioner. (This wasteful tendency would be corrected by the NHS plans, if they are implemented.)

The salaries of full-time public health physicians are relatively low, and several of these posts are filled by expatriates. Nursing salaries were formerly low, but have now been raised. The time of public health nurses, it is reported, has often not been fully utilized.

WHO relations. In general, Barbadian health personnel speak favourably of WHO. Fellowships have been considered very helpful, in spite of complaints about bureaucratic procedures. Workshops, consultants, and publications were, on the whole, assessed positively. For their conceptual content, World Health Assembly resolutions are always studied by the decision-makers in the Ministry of Health, although Barbados does not always send a delegate to the Health Assembly. Meetings of the Pan American Health Organization (WHO Regional

Office for the Americas) Directing Council, however, are attended regularly. The crucia political decision to launch a national health service in Barbados - stressing primary car by general practitioners and a more efficient system of drug distribution - was influenced b observations in United Kingdom, rather than by WHO.

The proposal to transfer nursing education from the hospital (under the Ministry o Health) to the Community College (under the Ministry of Education) was made on the advice o PAHO. This seems contrary to the policy advocated by WHO, and the change may lead to lesse integration between health manpower development and health service needs. (One must recall however, that even with the nursing school under the Ministry of Health, the output was no perfectly adjusted to the service requirements.)

For the future, Barbados would like collaboration with WHO in training personnel for th management of the new NHS. In general, the NHS plans have sharpened the recognition of need for more sophisticated and continuous manpower planning in Barbados. The private general practitioners need continuing education in preventive medicine if they are to be entrusted with immunizations and with maternal and child health work (now done separately in the Ministry's health centres). Training in geriatric nursing is also needed if the district hospitals for long-term care are to be improved. These illustrate subjects, it was stated, on which Barbados would have wanted workshop training.

In spite of its long colonial status and only recent independence, Barbados is a small, moderately developed and highly literate island country. The election of the Labour Party to power in 1976 led to ambitious plans for a national health service that would start with the reorganization of primary care to be available to everyone. Secondary and tertiary care are already well provided at one major hospital. The NHS goal has stimulated much more serious health manpower planning than in the past, and it is expected that manpower production - particularly at the postgraduate level - will be capable of meeting the requirements of the NHS system in the near future.

Comment

This completes a summary of the field observations in six developing countries, of diverse social, economic, and political character, with respect to their policies and practices in health manpower development - against the background of their total health systems and with respect to their relationships with WHO. Various inferences may be drawn about the nature of the whole HMD process, in relation to the sociopolitical characteristics of countries, but this will be done in the concluding chapter.

Chapter XIII

WORLD TRENDS IN HEALTH MANPOWER

Previous chapters have attempted to characterize health manpower development in countries over the last 30 years, and the interactions of WHO and its Member States which influence WHO health manpower policies. WHO, in turn, has promoted over these decades a changing blend of health manpower policy objectives. What has been the net outcome of all these activities?

World movement for health advancement

One must never lose sight of the dependence of health manpower policies and programmes on overall national health policy developments in countries. As discussed throughout this study, since the end of the Second World War there have been in most countries enormous changes in the structure and functioning of national health systems. The economic support for health services has become increasingly collectivized - whether through the mechanism of public taxation, social security, or voluntary insurance. Patterns of health care delivery have become increasingly organized - very strikingly for hospital care but also for ambulatory care. While the greater part of this organization has applied to the curative services, preventive services of a wide spectrum have also expanded in both their quantity and their degree of organization. Much of this development has required the construction of physical facilities for both bed patients and ambulatory patients; hospitals and health centres have been established in greater numbers and capacities, and in many countries they have become linked in regional networks of institutions.

Related to and supporting of all these processes have been large and varied programmes for the training and development of health manpower. With advances in the health sciences and greater understanding of the dynamics of health services, an increasing diversity of types of health manpower has been trained and used. The responsibilities that were once carried by a lone village healer are now distributed among scores of categories of health personnel. Considering the subspecialties in medicine, nursing, and other fields, the disciplines in which personnel are trained and used must now be counted in the hundreds. For the provision of primary health care, auxiliary health personnel - with diverse skills, titles, and roles - have been trained in a vast variety of models throughout the world.

In the text below, we offer data, to the extent available, on the observable trends in health manpower development in countries over the last 30 years. We shall try to present this information in accordance with the series of policy objectives that took shape over these years as a result of the dynamic interaction between countries (Member States) and WHO. First we shall examine the trends toward eight specified objectives, in so far as they can be defined. These accounts will correspond to the sequence of chapters in Part Two of this study. Then we shall explore the relationship of manpower trends to the health status of populations - the improvement of which is the ultimate purpose, after all, of all national health systems. Finally, we shall try to evaluate the impact of WHO, if any, on health manpower trends - conscious always that WHO is itself a creature of the world community of nations, and its influence can only be in many ways limited.

Trends in the quantity and types of health manpower

The expansion since the Second World War of both the types and numbers of health personnel in countries has already been observed. In more detail, what has happened?

In 1955 there were, according to a WHO investigation, 603 medical schools in the world; by 1975 this number had risen to 1,116.[1] This increase of 85% in the world total of medical schools occurred while the global population increased during the same period by about 42%.

More significant is the distribution of these schools between developing and developed countries. If data were available for a century ago, 1880, there is little doubt that 90% of the world's medical schools would be found in Europe, North America, and other industrialized regions, and only 10% in the rest of the world. In 1955, of the 631 medical schools through-

out the world, 40% were in the developing countries. By 1975, of the 1124 medical schools, 54% were in the developing countries. In some of the developing country schools, moreover, the number of students per class is excessively large.

This growth of medical schools between 1955 and 1975 has yielded an increased output of physicians in the world. In 1950, there were 1.1 million physicians globally (excluding the People's Republic of China, the Democratic Republic of Korea, the Democratic Republic of Vietnam, Bhutan and Sikkim); by 1970 the number in the world (with the same exclusions) had doubled to 2.2 million. This increase was substantially greater than that in the growth of the population. Thus the ratio of physicians to population had increased from 57 per 100 000 in 1950 to 79 per 100 000 in 1970.[2] By 1977 there were 81 physicians per 100 000 globally.

These growth rates in medical manpower were, of course, not the same everywhere. Data on physicians by major world regions are available from unpublished statistics of the World Health Organization.[3] The ratios per 100 000 population in the years 1950 and 1975, along with the rate of growth of these ratios, are as follows:

World region	Physicians per 100 000		Rate of growth (%)
	1950	1975	
Africa	9	11	22.2
America	89	112	25.8
Asia	22	31	40.9
Europe	92	168	82.6
Oceania	88	114	29.5
USSR	131	288	119.8

From this tabulation, several meaningful contrasts may be observed. In Africa, for example, the density (ratio to population) of physicians was the poorest of any major world region in 1950, and it remained the poorest in 1975; yet over this quarter century the physician density increased by 22.2%. The next lowest density was in Asia (excluding China) for both years, although the rate of growth was still substantial, at 40.9%.

Compared with Europe and the USSR, however, the tempo of growth of physician density in both Africa and Asia was slow. Europe had many more physicians to start with in 1950 than either Africa or Asia, and by 1975 its density had increased by 82.6%. Thus the gap between these developed and developing continents had actually widened across the 25-year span. Nevertheless the actual densities of physicians in both of these developing continents increased to a certain extent. We know, of course, that the health needs of the developing continents are vastly greater than those of Europe and North America, while their physician density differentials are just the opposite; and it is these disparities that constitute one of the great challenges to international health work.

Separate data are available for Latin America (rather than the Americas as a whole) for the years 1950 to 1970. In several Latin American countries, the establishment of new medical schools was especially frequent in this 20-year period. The density of physicians accordingly rose from 471 per 100 000 in 1950 to 654 per 100 000 in 1970, an increase of 38.9% (greater than that for the Americas as a whole in 1950-1975).[4]

Trend data for other classes of health personnel are not so readily available as for physicians, but certain observations are possible. For the 10-year span from 1965 to 1975, for example, the global supply of professional nurses and midwives increased from 124 to 153 per 100,000 population. The rate of growth in density of these personnel in developing countries, however, was much slower than in developed countries - not to mention the very much lesser density in both years.[5] The following tabulation shows the trends:

Types of country	Nurses and midwives per 100 000		
	1965	1975	Rate of growth (%)
Developing countries	26	29	11.5
Developed countries	296	375	26.7

Thus, in the developing countries the density of professional nurses and midwives grew by 11.5% over the 1965-1975 decade. Yet in both periods the developed countries had more than 10 times the density of the developing countries, and the rate of growth of this density was more than double the comparable rate in the developing countries.

Unfortunately, these disparities were not compensated by the supply of auxiliary nurses and midwives across the same span of years. For this category of personnel, the trends were as follows:

Types of country	Auxiliary nurses and midwives per 100 000		
	1965	1975	Rate of growth (%)
Developing countries	20	24	20.0
Developed countries	116	151	30.2

The rate of growth of the auxiliaries over the same decade is again appreciably lower in the developing countries than in the developed ones.

For dentists the disparities between developing and developed countries have been even greater. In developed countries there were 34 dentists per 100 000 population in 1965 and this ratio rose to 39 by 1975. In developing countries the density was only 5 per 100 000 in 1965 and it remained 5 per 100 000 in 1975. Dental operating auxiliaries (such as the New Zealand dental nurse) had a density of only 1 per 100 000 in the developing countries in 1965 and it remained at this level 10 years later; in developed countries these auxiliaries increased over this decade from 5 to 9 per 100 000.

Laboratory technicians rose in density from 1 to 2 per 100 000 in the developing countries between 1965 and 1975, but from 28 to 43 per 100 000 in the developed countries. Radiological technicians also rose from 1 to 2 per 100 000 in developing countries during the decade, and from 16 to 19 per 100 000 in the developed countries.

In a word, the densities of almost all conventional types of health personnel rose somewhat between 1965 and 1975 in developing countries, but their rate of increase in developed countries was usually much greater. Even though these data are obviously influenced by the accuracy of manpower reporting (which is often weak in developing countries), such deficiencies would not greatly affect trends; in fact, since reporting could be expected to improve with time, the true rise of trend in developing countries might even be less than the above data suggest.

Trends in personnel performance

Several of the health manpower policy objectives analysed in previous chapters relate to the manner of functioning or the performance of health personnel. These would include (a) the objective of improving quality in the sense of academic excellence, (b) the objective of efficiency or economical patterns of work, and (c) the objective of relevance of personnel or the appropriateness of their work to the needs of the people they serve. What is known about trends in these three attributes of health manpower in the world over the last few decades? This is not an easy question to answer, but certain observations may be made.

Regarding quality, one indicator of the conventional concept of scientific qualifications in medicine is the development of specialization. It is generally recognized that much of the incentive of medical graduates to enter specialties results from the highly "sophisticated" and technological approach of their undergraduate schooling.

In the more industrialized and developed countries, the worldwide trend to increased specialization of the medical profession has been very clear. In previous chapters we have noted some of the influences in medical science, health care financing, and population changes contributing to this. We have also taken note of the reaction that arose in many countries around 1970 to stem the tide of specialization, and to give greater attention to the strengthening of general practice or family medicine. Immediately after the Second World War, however, the movement to specialization in the developed countries was prominent. For the decade 1960-1970, a WHO study reports exact changes in 14 developed countries (13 of them European). The proportion of all physicians in specialties in these countries was already as

high as 50.6% in 1960; it rose further, however, to 58.1% by 1970. Moreover the rate o specialists per 100 000 population rose much faster over this decade than the equivalent rat for non-specialists; the density (per 100 000) of specialists rose by 46.8% compared to rise of only 9.9% for non-specialists.[6]

In developing countries, data are not available on overall trends in medical speciali zation; it has undoubtedly been less than in the developed countries, but the trend ha surely been upward. Another indirect reflection of advances in academic qualifications o medical schools in developing countries is found in the cross-national trends of physicia migration. Before and for some time after the Second World War, the movement of physician had been predominantly from the developed to the developing countries; physicians went fro Europe to the colonies in Asia and Africa. Some years after war, the direction of this flo reversed. As former colonies became independent and increased their output of physicians, many of the graduates left for study and often permanent settlement in Europe and North America. This is shown strikingly for the USA, on which statistical data are available according to the region of origin of the migrating physicians:[7]

Region of origin	Percentage of foreign physicians entering USA		
	1965	1969	1973
North & Central America	21	14	15
Europe	26	25	20
South America	9	7	11
Asia	40	48	46
Africa	?	4	6
Other areas	4	2	2
All regions	100	100	100

Thus, from North America and Europe the trend of migration to the USA between 1965 and 1973 was downward, while from South America, Asia, and Africa the trend was essentially upward. Similar trends have been documented for the migration of physicians from certain Asian countries (India, Pakistan, and Sri Lanka) to the United Kingdom.

In Chapter VI we discussed the detrimental effects of this migration from less- developed to more-developed countries. Yet it must be realized that developed nations, such as the USA and the United Kingdom, allowed the entry of these foreign medical graduates only when their medical qualifications were deemed acceptable by the recipient country - as shown by passing certain examinations or in other ways. It is reasonable to infer, therefore, that the academic standards of some medical schools in the developing donor countries in these post- war years were approximately similar to those in the developed recipient countries. This says nothing, of course, about the suitability of professional education for the needs of developing countries, but only about the attainment of the goal of higher academic standards (that is, similar to standards in highly developed countries), espoused in the early years of WHO.

Regarding efficiency of work patterns, Chapter VIII discussed the training of health auxiliaries, the use of health teams, and training for effective management of health systems. What can be said about trends in these three types of activity?

Precise data on trends in the availability of multipurpose health auxiliaries in the world are not available. Earlier in this chapter, however, we noted the increased density of auxiliary nurses and midwives in both developing and developed countries (though to a greater extent in the latter), between 1965 and 1975. It may also be noted that over the same decade, the countries reporting to WHO on their supply of multipurpose health auxiliaries rose from 1 to 23 (22 of these, in fact, being developing countries).[8] Professional nurses also, of course, contribute to more efficient delivery of health care. Their increased density in the world, therefore, also suggests greater efficiency in the overall use of health manpower.

The trend in the use of organized health teams throughout the world is even more diffi- cult to document. The hospital, as a setting for teams of personnel serving bed-patients, should not be overlooked, and the ratios of hospital beds to population have been increasing

n nearly all countries. Between 1950 and 1975, the beds per 10 000 population in Ghana, for xample, increased from 4.6 to 16.7; in India the ratio rose from 3.3 to 7.8.[9] While in ome countries (e.g., Jordan) the hospital bed-population ratio has actually declined - ainly due to the rapid growth of population - the world trend in both developed and develo- ing countries has clearly been towards a greater number of hospitals and more health per- onnel in them. In fact, in many countries - because of rising health expenditures and for ther reasons - around 1970 there arose reactions that led to deliberate constraints on ospital bed expansion and encouragement of more facilities for ambulatory care.

Health teams for the provision of ambulatory care have also undoubtedly been increasing, n comparison with isolated practitioners of either modern or traditional medicine. In many eveloped countries, such as Canada, Japan, the United Kingdom, or the United States of merica, much of this teamwork takes the form of private group medical practice. In all the ocialist countries, teams of personnel are the general rule for delivery of ambulatory care, oth preventive and curative, at health centres or polyclinics. In most developing ountries, particularly in rural areas, various types of health centre have increasingly ecome the setting for delivery of health services to low-income populations (who are, of ourse, in the great majority). This was evident in all six of the countries studied and iscussed in Chapter XII. In so far as governmental (as against private sector) health ervices are being provided in virtually all developing countries, teams of personnel in ealth centres, or even at small health posts, at primary health care level, are increasingly he standard mechanism for furnishing health services.[10]

Finally, in relation to efficiency, the training of personnel for effective management of ealth services has manifestly been receiving increased attention in countries of all types. uch training is given in many settings - in universities, in Ministry of Health training schools, and in various hospitals and health centres. The specialized school of public ealth, where academic degree programmes are offered, is a major setting for training in ealth care management. The first WHO World Directory of Schools of Public Health, descri- bing the situation in 1965-66, identified 87 such schools in 42 countries. Only five years later, in 1970-1971, a subsequent WHO directory identified 121 schools of public health in 44 countries.[11] This did not include specialized schools of hospital administration, which also teach health services management and have clearly been multiplying, nor medical schools giving special instruction in public health. Judging from the comments by health personnel in the six countries reviewed in Chapter XII, the demands for much more suitable instruction in health management are much greater than are being met, but even the articulation of the need is a sign of progress on this aspect of seeking greater efficiency in the use of health personnel.

Trends reflecting the relevance of health manpower training to the needs of each country's health services are also difficult to measure; there is much partial or episodic evidence, however, of advances towards this goal.

We have noted in Chapter X the frequent advocacy in WHO of greater emphasis on the teaching of preventive and social medicine in medical schools. For many reasons, preventive and social medicine (PSM) teaching in medical and other professional schools undoubtedly grew stronger over the years after the end of the Second World War. Epidemiology made great strides, pointing to new methods of disease prevention and control.[12] Society's demands for organized social action to promote human welfare increased everywhere.[13] Universities were bound to echo these developments, and in medical schools this usually meant the streng- thening of PSM teaching.

Precise documentation of this trend on a worldwide basis has not been done, but the trend is evident from observations of several sorts. Prior to the Second World War, it was common for medical schools to have academic departments of hygiene - often linked to departments of bacteriology - concerned with problems of sanitation and communicable disease control. After the war, and especially in the later 1950s and the 1960s, these departments were either replaced or supplemented by departments with a much broader approach - epitomized often by inclusion of the word "social" in their titles. It is noteworthy that the First World Conference on Medical Education, in 1953, discussed the teaching of virtually every basic science and clinical discipline, but the only topic with any PSM flavour was a discussion of tropical medicine.[14] Six years later at the Second World Conference on Medical Education, in 1959, there were four presentations on "socioeconomic aspects of ... health and disease" and the "teaching of social medicine".[15] The Third World Conference on Medical Education,

in 1966, had for its central theme: "Medical education - a factor in socioeconomic develop ment".[16] The Fourth World Conference on Medical Education, in 1972, included no discussi of basic or clinical sciences at all, but was devoted to such subjects as:[17]

- community health needs
- socioeconomic factors of population and society
- patterns of medical care
- health manpower and the delivery of health care
- patterns of professional practice that promote and hinder change
- comprehensive educational planning as a means to initiate change
- teaching the teacher to teach.

The conceptual trend from the technical to the social approach to medical education was quit clear.

A study of trends in the teaching of public health in the medical schools of 19 Europea countries published by WHO in 1957 provides much evidence of the broadening content an generally increased place of public health in the curricula.[18] It describes three period in the evolution of this teaching (up to 1952): first, the period dominated by bacteriolog and sanitation; second, the period when hygiene on a practical level became separated fro bacteriology; and third, the 1950s, when "public health" was replaced by "social medicine as well as the clinical approach to preventive medicine".[19] In the United States o America, advocates of PSM teaching did not have as great an impact on medical school curri cula as they would have liked, although academic attention to the field clearly expande after the Second World War.[20] In the late 1960s, usually under the umbrella title o "community medicine", the social factors in disease and the social organization of healt services won increasing attention in most medical schools.[21]

These trends in the teaching of PSM were not limited, of course, to Europe and the Unite States. In 1955 the All-India Conference on Medical Education had emphasized PSM teaching, as did the Pacific Regional Conference on Medical Education in 1958. A series of seminars o teaching preventive medicine in Latin America were held in 1956, and in 1961 a conference o teaching of preventive medicine was held in Iran.[22] A meeting in India in 1968 heralde the development of social and preventive medicine in Indian medical schools over the previous 10 years.[23] In the 1970 Heath Clark lectures at the University of London, a glowing report was given of the training in community health that had evolved over the previous 20 years at the medical school in Cali, Colombia.[24] Somewhat similar developments are described also at medical schools in Nigeria, Thailand, Uganda, the United Republic of Cameroon, and other developing countries.

An extensive survey of medical education throughout Latin America was sponsored by the Pan American Health Organization in 1967. In 100 schools the average amount of curriculum time devoted to PSM teaching was 205 hours, and this was a definite increase over the past.[25] The teaching content included not only such classical subjects as epidemiology and statistics, but also health economics, the organization of health services, and behavioural or social science. In 45% of the Latin American schools there was extramural teaching about family and community problems. The investigator concluded that "the changes occurring in the teaching of the preventive and social aspects of medicine during recent years have constituted one of the most important occurrences in the field of medical education".[26] The new medical schools established in Africa in the 1960s have stressed the assignment of students to rural health centres as the main approach to the teaching of preventive and social medicine.[27] Likewise, in the Philippines third and fourth year students from all medical schools have been assigned for periods to "comprehensive community medicine demonstration areas in rural communities".[28]

This account of the growth of an emphasis on PSM teaching in medical schools throughout the world is far from comprehensive. It does not clarify, furthermore, the extent to which social or PSM concepts have entered into the teaching of basic science or traditional clinical subjects - an approach widely advocated (in contrast to separately identified PSM instruction), though seldom observed. Yet, a stronger place for chairs of preventive medicine, or however the field may be defined in medical schools, may have a long-term impact on the educational approaches of other faculty members. Admittedly, the evidence on this issue is unclear.

Another reflection of the overall objective of relevance in professional training has been the heightened attention given to general practice or family medicine in medical education - advocated for some years by WHO and its expert committees. This is a recent trend and has been more prominent in developed countries - doubtless as a reaction to the excessive development of specialization in those countries during the first 50 or 60 years of this century. The establishment of departments of general practice in medical schools, the development of postgraduate residency training programmes in family medicine, the organization of continuing education programmes specifically for the general practitioner have all been educational responses to the demands in communities - sometimes even in legislative bodies - for a greater availability of physicians (and other health personnel) to provide primary care.

In the 1960s, the swelling proportion of specialists in many industrialized countries and the declining proportion of generalists led to demands within the medical profession itself to increase the social position and financial rewards of the general practitioner. The strategy in several countries was to define general practice as a specialty, requiring prescribed years of extra training, equivalent to those in the conventional specialties. In the United Kingdom a Royal College of General Practice was organized in 1965, and in the United States a specialty of family practice was formally established in 1969. A study of five other industrialized countries in the 1970s - Australia, Belgium, Canada, Norway, and Poland - showed a variety of strategies for strengthening and upgrading general medical practice in all of them. Specialty-type residency programmes were organized, all sorts of continuing education were offered, general practice departments were formed in medical schools, health insurance fees for GP services were raised, pension programmes were started, and so on. In Norway and Canada public authorities built health centres in which the GP could work in a team with nurses and other allied health personnel.[29]

A survey of medical schools of Canada and the United States in 1975 found that the vast majority of them - 93% in Canada and 80% in the United States - were offering some sort of family care training programme; these consisted of undergraduate teaching, postgraduate, or both.[30] In the United Kingdom, some special postgraduate training for general practitioners had been offered (in Scotland) as early as 1952, but rapid extension of these programmes occurred only after 1966; most of these are, strangely enough, hospital-based and require 3 years.[31] It is relevant that in 1966 the remuneration of general practitioners within the British National Health Service was increased and, along with this, Regional Advisers in General Practice were appointed to promote the postgraduate training programmes.[32]

This entire movement for enhancing both the quality and quantity of general medical practice in the highly developed countries, where specialization had become so extreme, has undoubtedly contributed to greater relevance in the work of the medical profession. In the developing countries, where formally recognized specialists still constitute a minority of physicians, this issue has not been so prominent. Continuing education of physicians, as discussed in previous chapters, has often been directed mainly to general practitioners, who constitute the large majority of all physicians. But the major approach to strengthening general primary health care in developing countries, as we have seen, has been through expanded training of multipurpose health auxiliaries. Earlier in this chapter, we noted that up to 1975 even this strategy had not developed to very large proportions. The Alma-Ata Conference on Primary Health Care in 1978 undoubtedly stimulated greatly accelerated training of non-medical primary health workers with broad functions. This was evident in all six of the countries analysed in Chapter XII. Numerous specific programmes of this sort, in which WHO has played a part, have also been discussed in Chapter VII.

Another reflection of world trends toward the relevance objective has been the development of teacher-training programmes. An evaluation of accomplishments in this work for the decade 1969-1979 was recently made. The eight regional teacher-training centres, plus the Inter-Regional Teacher Training Centre in Chicago, USA, were found to be doing much innovative work, although only a few national centres had been established. Their most significant achievement was believed to be the stimulation of teachers, mainly in medical schools, to explore new methods of teaching - such as more careful educational planning with explicit formulation of learning objectives. The greatest weakness of the centres was deemed to be their failure to have a real impact on the education of health personnel other than physicians; much greater attention is needed in the future, it was concluded, on the training of effective teachers for non-physician primary health workers.[33]

Some indication of the degree of adoption of teacher-training concepts in health professional schools of the world is given in a study organized by WHO, on which only a preliminary report is so far available. A key feature of teacher-training is to persuade teachers to define explicit objectives at the outset of any instruction. This global survey, therefore, posed to schools of nursing and medicine the question of whether or not the school uses institutional objectives in its educational programme, defining these as:

> "A statement describing the expected results of learning experiences as they manifest themselves in the performance or behaviour of the learner, at any level of expertise and for any type of work; these results may be qualified by appropriate modifiers that are defined in the objective itself."[34]

For this survey, questionnaires were sent to 337 nursing schools and 614 medical schools, first inquiring if they had formulated institutional objectives. Of the nursing schools, 142 responded affirmatively, and of these 84 (or 24.9% of the total) submitted statements deemed to meet the above definition. Of the 614 medical schools, 164 responded affirmatively and of these 58 (or 9.4% of all) submitted statements meeting the above definition.[35]

One may, in general, conclude that - interpreting the use of explicit learning objectives as reflecting the type of educational planning emphasized in teacher-training programmes - such methods might be applied by about one-fourth of the nursing schools and one-tenth of the medical schools throughout the world. We do not have data for an earlier period from which to draw a trend line, but one may infer that even these small percentages are probably an increase over the past.

Perhaps a more significant reflection of the use of teaching methods that have been effective in preparing students for the relevant health problems in their nations and communities can be gathered from a consideration of the community-oriented health science schools discussed in Chapter X. At the 1979 WHO meeting which established a network of such institutions, there were participants from 18 schools. In the two volumes in the WHO Public Health Papers Series presenting case studies of innovative educational programmes for health personnel (No. 70 in 1978 and No. 71 in 1980), accounts are presented on 27, schools of which 20 were medical schools. If we were to assume that roughly three times as many medical schools in the world are, indeed, community-oriented (along the lines discussed in Chapter X), but have not yet been identified as such by WHO, this would amount to 60. In relation to the 1975 count of 1,116 medical schools in the world, 60 would mean about 5% of the total. Such a crude and arbitrary calculation would accordingly suggest that perhaps roughly one-twentieth of the world's medical schools are now educating physicians in a manner designed to be truly relevant to the health problems of populations to be served.

This whole discussion of trends in health personnel performance - as reflected in considerations of the academic quality of their education, in the efficiency of their use, and in the relevance of their training curricula - is far from satisfactory. We may hope that more complete data will permit more accurate assessments of trends in the future. On the basis of the limited data available, however, one may conclude that over the last few decades the academic quality of health professional education has probably improved - with some positive and some negative consequences (from the viewpoint of meeting social needs). The efficiency of health personnel has undoubtedly increased in most countries, although to an extent far below the true requirements. As for the relevance of health science curricula, one must conclude that in some respects (training in preventive and social medicine and emphasis on primary health care) progress has been appreciable, but in other respects (use of sound approaches to educational planning and processes and community-orientation) only a small beginning has been made. By all three of these indicators of personnel performance, nevertheless, the trends have been in a favourable direction. Yet resistance persists, and the greatest tasks lie ahead.

National health manpower policy issues

Beyond these questions on the quantity and performance of health manpower, one may consider the objectives that involve, in a sense, larger issues of national health manpower policy. These would include the objectives of health manpower planning, full population coverage, and the integration of health services and health manpower development. What have been the trends towards the achievement of these three objectives?

Within the sphere of WHO, we have observed in Chapter IX that in the decade 1962-1972 Period III of this study) substantial interest arose in national health planning, and in ealth manpower planning as part of this. Then in 1973 and later, interest somewhat eclined, as disillusionment arose on the value of the highly quantitative and theoretical pproaches that dominated planning methodology; instead, emphasis was put on achieving olitical consensus and commitment for health actions based on general assessments of need.

Health manpower planning, nevertheless, usually permits and requires greater specificity n countries than national health planning as a whole. In the developed countries, health are market dynamics, rising costs, and other factors have led to perceptions of needs for raining greater numbers of certain types of health personnel and fewer of others. To cite ome examples, in Belgium the viewpoint has grown that the country's physician resources were ecoming excessive;[36] in the United States and Canada, it is widely believed that national eeds for physicians will soon be met and that a surplus is imminent. In the developed ocialist countries, on the other hand, the stock of physicians continues to increase. ustralia and the Federal Republic of Germany are other developed countries where the medical arket is considered to be saturated with physicians. Under such circumstances, steps are eing taken to slow down the output of physicians and to limit the immigration of foreign edical graduates. Greater stress is being put on the training of nurses and other cate- ories of health personnel. These judgements lead essentially to planning decisions that are mplemented in various ways - often by modified funding for educational institutions.

In developing countries, health manpower planning has taken various other forms. As we saw in Chapter XII, great stress has been put on the training of auxiliary health personnel n the six countries studied, as in many others. The needs are usually so much greater than the resources to meet them that almost any number of personnel that can be trained are trained. The real limiting factor is simply the availability of resources. On the other hand, some developing countries - illustrated by Costa Rica (in Chapter XII) and also by Brazil and Mexico - have proceeded to multiply their medical schools with hardly any central plan for using the physicians produced.[37] Considerations of the demand on behalf of young men and women who wish to enter a prestigious profession seem in such countries to be more important than an assessment of the population's needs and the ability to support economi- cally the output of these medical schools. Similar considerations have characterized some countries where numerous private medical schools have produced physicians and nurses largely for export.

In socialist countries, the planning of health manpower has probably been more deliberate and systematic than elsewhere. Basing estimates of need on studies of health service utilization, standards for the staffing of health services are set. Then, within the con- straints of educational resources (school facilities, teachers, etc.), quotas are set for the output of various schools for health personnel. The decision of Poland, for example, to stop training feldshers around 1960, when the supply of physicians had become adequate, was an interesting reflection of manpower planning.[38]

It is very difficult to epitomize world trends in health manpower planning as a whole. The political ideology of countries appears to be crucial. Probably the most fundamental and generalized fact is that practically all nations of the world have come to find it useful and important to have information - the numbers and the ratios to population - about the various types of health personnel in the country. Even such simple data were seldom sought or collected by countries 50 years ago. Beyond this, deliberate planning to meet population needs seems to be influenced mainly by market observations in free-enterprise countries - both developed and developing. Such market considerations include both the numbers and the expected annual incomes of each type of health personnel. In socialist countries, or countries tending to move in this direction (for the health sector, if not generally) health manpower planning seems to be based mainly on an assessment of population needs; resource constraints, of course, may delay for some years the attainment of the desired norm or standard.

Regarding the objective of population coverage, it was obvious from the Alma-Ata Conference that the ideal had been reached in only very few countries. The type of health manpower wanted in order to cover all areas of a country, of course, differs with its level of economic development. The United Kingdom wants physicians, while Uganda at this stage of its development wants medical assistants and primary health workers. The types of personnel deemed appropriate for coverage naturally also change over time, as strikingly illustrated in Chapter XII by policies in Malaysia.

A crucial feature of the coverage objective, of course, is the geographic distribution o health personnel. Some highly developed countries - the United States of America, fo example - may have ample national supplies of physicians, and yet there are certain areas mainly rural, with a shortage of them. Other less affluent countries - for example, Cost Rica or Cuba - may have smaller national ratios of health personnel and yet have achieve rather balanced geographic distribution and coverage. The difference lies in the extent t which the country implements a structured system or framework for the delivery of healt services, as compared with reliance on market dynamics.

Even under the most free or unregulated market conditions, an overall increase in th national density of health personnel can lead to some degree of improved coverage in rura areas. We have noted in Chapter XII how, in Malaysia, private general practitioners - wh are under no obligation to settle in rural areas - often move to small towns in rural area simply because the medical care market in larger cities has become saturated. A counter vailing force in many developing countries, on the other hand, is the greater rate of growt (due to high birth rates) of rural populations. The net consequence of these opposin tendencies would have to be calculated before one could draw reliable conclusions abou overall world trends in health manpower coverage.

The gap or disparity between urban and rural areas of a country may increase, even thoug the density of personnel in rural areas remains constant. Thus, in the Republic of Korea the national supply of physicians increased from 29 per 100 000 in 1960 to 45 per 100 000 i 1970.[39] Yet, between 1964 and 1974 the physician density in rural areas declined from 30 of that in cities to 27%.[40] It is highly likely (though not certain) that this increase disparity was due to the settlement of most new medical graduates in the cities - even thoug the rural physician density may have remained unchanged or even improved.

In certain countries health manpower coverage of national populations in recent years has improved remarkably. Achievements in making essential health services available throughout the great territory of the USSR are widely recognized. Coverage of the vast population of the People's Republic of China with barefoot doctors has been discussed in Chapter VII. The greatly improved health manpower coverage of the population of Cuba, since its revolution of 1959, has also been documented.[41] In Canada, following the enactment of its national insurance programme for physician's care, the medical coverage of rural areas in the provinces of Ontario and Quebec showed measurable improvement.[42] Through various pro- grammes for the training and development of auxiliary health workers, greater rural area coverage has been achieved in Sudan, the United Republic of Tanzania, Venezuela, Viet Nam, and elsewhere.

The unmet health needs in the rural areas of most developing countries, nevertheless, remain severe. The shortages of rural physicians - dramatized by the disparities in urban compared with rural physician densities - are the most dramatic. In the Sixth report on the world health situation, one finds that in 11 developing countries on which data were avail- able for recent years, the urban-rural distribution of physicians showed improvement in 4, no change in 1, and deterioration in 6.[43] It is discouraging facts of this sort that have led so many developing countries to change their health manpower strategies from training simply more physicians to training also greater numbers of health auxiliaries of various types. This policy change gives some grounds for greater optimism on the achievement of population coverage with appropriate health manpower in the years ahead.

With respect to the integration of health services and health manpower development - the HSMD concept discussed in Chapter XI - the evidence on trends is spotty, but it appears to point in the direction of gradual progress. That is, in various ways closer administrative relationships are being developed between ministries of health or other organized health programmes, on the one hand, and ministries of education, universities, and training schools on the other. In Chapter XI, we discussed the evidence for these trends, at the levels of planning, production, and management of health personnel. The process of integration or coordination was observable in many countries and in various forms.

Numerous countries, both developed and developing, have established national health councils through which leaders in health and in education can communicate their respective needs, problems, and plans. Even without such councils, health ministries sometimes transmit their estimates of manpower needs to ministries of education. In almost all countries, there are certain types of personnel that are trained directly in programmes of the health

uthorities. Almost all public general hospitals are also engaged to some extent in raining, as are many ambulatory care centres. On the other hand, university-controlled eaching hospitals obviously provide a great deal of health service. In most of the ocialist countries, responsibilities for the education of physicians and other personnel ave long been assigned to ministries of health; this has been done also in some other ountries, such as India and Iraq. Such complete unification of responsibilities for health anpower development and health services does not necessarily mean complete integration of olicies, but it clearly lays a firm basis for such integration.

In the six country case studies (Chapter XII), one could observe the several forms of interchange occurring between health and education agencies. Through studies and planning, countries are increasingly formulating goals on the types and numbers of health personnel required to provide the health services that the country wants and is prepared to support economically. In the past, and still today, the absence of such overall goals has led to the production of surpluses of personnel in some health disciplines, along with shortages in others. Recognition of these and other problems such as the misutilization of existing health personnel in most countries is leading in varying degrees to different approaches in the realization of the HSMD concept.

Trends in the health status of populations

In spite of all the persistent problems of disease, malnutrition and trauma throughout the world, in recent decades the health status of the global population has improved. Using the very broad index of life expectancy at birth, in the period 1950-1955, the worldwide average for all countries was 47.2 years; by the period 1970-1975 this had lengthened to 56.0 years, an extension of life expectancy by 18.6%.[44]

This extension of average life expectancy has been due, of course, to countless changes in the physical and social environment, of which the provision of health services is only one. Many have pointed out that health status improvements have probably been due more to general social advances in living conditions than to medical intervention.[45] There can be no doubt, however, that health services have played a definite part, as we will see below.

The extension of life expectancy has been striking in both developing and developed countries. Contrary to what one might expect, in fact, the relative improvement from 1950-1955 to 1970-1975 has been greater in developing regions of the world than in the developed regions. The trends are summarized in the following data published (on the basis of United Nations reports) by the World Bank in 1980.[46]

	Life expectancy at birth (years)		
World Regions	1950-55	1970-75	Increase
Africa	37.5	46.5	9.0
Latin America	52.0	61.2	9.2
East Asia	47.5	63.3	15.8
South Asia	39.2	49.3	10.1
All developing regions	42.5	53.2	10.7
Developed regions	64.3	70.3	6.0

Thus, the extension of life expectancy for the aggregate of developing regions over this 20-year period was by 10.7 years, constituting an increase of 25.2%. In the developed regions it was by 6.0 years, constituting 9.3% improvement.

One might object that in the developed regions, with life expectancy coming closer to a biological limit, one could not expect so much improvement as in the developing regions, which in 1950 were at a very low level. Yet, if one calculates the gap between developed and developing regions in the two time-periods, one finds that this also has been diminishing rather than increasing. In 1950-55, the life expectancy in developed regions was 21.8 years longer than in developing regions, an advantage of 51.3%. In 1970-75 the difference had declined to 17.1 years - an advantage of 32.1%.

how much of these improvements in either the developed or developing countries can b attributed to health services is a very difficult question. Since general social an environmental improvements tend to go hand in hand with the expansion of health services, i is not easy to disaggregate one influence from the other. Changes that may be attributabl to health manpower - the numbers, types, distribution, functions, etc. - as distinguishe from other influences, are even more difficult to isolate, if at all possible.

An attempt has been made, nevertheless, to explore the relative importance of a country' health services - including health manpower resources specifically - and of socioeconomi conditions, in order to determine or explain the level of its population's health. As par of the current study, WHO (in collaboration with the Johns Hopkins School of Hygiene an Public Health) carried out statistical analyses on health and social data from 13 countries. Correlations were explored among variables on (a) socioeconomic conditions, (b health resources, and (c) health status circumstances. In contrast to previous studies o the relationship to health status of both socioeconomic and health service indicators, thi study analysed relationships among a rather large number of variables (12) in a large numbe of countries (131) throughout the world.[47] Data for each country on each of the 1 variables were analysed for two separate years, 1950 and 1975. The study also explored the relationships between socioeconomic variables and measurements of health manpower i countries.

Not surprisingly, the major variables explaining life expectancy were found to be socio-economic. Several such socioeconomic variables together (per capita GNP, plus four indicators of educational strength) explain more than 80% of the variations among countries in life expectancy. Highly important from the perspective of the current study, however, was the finding that when health resource variables (physicians per 10 000 population and hospital beds per physician) are added to the equation, the correlation with life expectancy increases further. Specifically the coefficient of determination (R^2) rises from 0.84 to 0.90 or an increase of 7.1%. This would seem to be a powerful rebuttal of critics like Ivan Illich who claim that physicians do more harm than good.[48] The data indicate that, over and above the overwhelming influence of national wealth (as reflected by per capita GNP), a greater supply of physicians correlates with a further extension of life expectancy.

The greatest influence of physician resources on life expectancy is found when the measurement of resources is for 1950 and the life expectancy is for 1975. In other words, there is apparently a lag between the health benefits (life expectancy) and the input of health manpower (physicians per 10 000). Expressed in another way, one may conclude from this study that - if per capita GNP were theoretically constant - a 35% increase in the physician/population ratio would in time lead to an extension of life expectancy by one year. Moreover, since physician resources are intrinsically closely dependent on (and therefore also reflect) per capita GNP, one finds that this health manpower variable alone is more strongly predictive of a country's life expectancy growth than per capita GNP alone.

Life expectancy, of course, is only one measure of the health status of a population. The quality of life - in terms of a person's ability to work productively and to live happily - is obviously as important as or perhaps more important than a simple measurement of years of life. Unfortunately, statistical indicators of the quality of life are not now available for many countries. Even when such indicators as days of disability per person per year are available in certain countries, one can seldom determine the influence of health services as distinguished from general socioeconomic circumstances. It is only possible to conclude that health manpower improvements, reported earlier in this chapter, may be associated positively with the few indicators of health status in populations that are now generally available.

Impact of the World Health Organization

The previous sections of this chapter have reviewed demonstrable trends in health manpower policies and programmes throughout the world, analysed in terms of eight specific objectives that over the years have shaped the World Health Organization's HMD programme. We have also reviewed briefly the trends in the health status of the world population and reported on a study exploring correlations between the health status of national populations and the development of health manpower resources. Previous chapters have discussed the numerous WHO programmes in health manpower that have been promoted in accordance with the eight principal objectives.

None of these analyses can tell us, however, to what extent the work of WHO has influenced, if at all, actual HMD developments in countries. This question is far easier to ask than to answer; WHO activities are obviously only one - and certainly not the most important - among countless influences on health developments generally in countries and HMD trends in particular. In this section we shall try to examine the available evidence on WHO's contribution to HMD trends in countries, recognizing always that much of this must be based simply on the judgement of informed observers, rather than on the type of hard data customarily available in a scientific experiment.

This is not the first occasion on which efforts have been made to evaluate WHO activities in education and training. In 1967, an extensive study was carried out to evaluate the WHO programme for education and training (1948-1966).[49] This evaluation was conducted by a special advisory group of seven experts on the basis of five working papers prepared by WHO staff and consultants. The working papers gave comprehensive summaries of several education and training activities carried out from 1948 to 1966 by WHO (both at headquarters and in the regions), and classified them according to the type of programme and the countries in which WHO worked.[50]

Under the topic entitled "influence of WHO assistance", there are some rather general comments about WHO's HMD projects in countries. Illustrative observations were the following:

> "The most frequent gap or weakness in the (medical school) curriculum, in which WHO assistance has been given in the projects studied, was preventive and social medicine... The second most frequent gap in the curriculum, in which WHO assistance was given by WHO professors and tutors, was in the basic medical sciences... The most frequent WHO assistance to the total programme of medical education in a country or area was provided by WHO advisory teams or consultative groups, to make surveys and recommendations... In a few projects WHO provided a principal or dean... In many projects the WHO professors noted that an opportunity to influence the curriculum and teaching, beyond their specific fields, was offered when they were invited to participate as members of boards of studies or faculty committees... In a number of projects of assistance to schools or institutes of public health the WHO project staff, in addition to postgraduate instruction, have also taught their particular subject in the undergraduate medical school... When WHO visiting professors taught both undergraduate and postgraduate courses, their influence and inter-relationship were very tangible."[51]

Based on rather descriptive statements like those above, the Advisory Group was understandably cautious in its judgements. Thus it stated:

> "The (HMD) programme, as can be inferred from the list of assistance given to national projects, has been broad and world-wide in scope... In some aspects the programme has made significant contributions to progress in the world health situation... The programme has continuously expounded the doctrine of adaptation of education to specific local situations, even while it sought to raise educational standards simultaneously in distinctly different environments throughout the world.... In the teaching of medical students, the programme has encouraged the incorporation of research, particularly in local problems; it has promoted the concept of extra-mural training in community medicine; it has fostered a streamlining of the curriculum and an integrated approach to teaching between the basic medical sciences, the clinical sciences and social medicine... Another noteworthy accomplishment was the promotion of the training of various kinds of auxiliary personnel for whom there is a need everywhere, both in the more developed and in the developing countries... The group noted that much attention had been given in the programme to the teaching of public health and preventive medicine."[52]

Also, on more than one occasion in the past, evaluative studies have been made of WHO fellowships. During the years 1947-1957, there were 7796 fellowships awarded, and a sample of 1053 of these was studied.[53] It was found that the vast majority of fellows had benefited from their studies. They "are making contributions in informing and training others, in improving or expanding existing services or establishing new ones, in carrying out research and in providing leadership".[54] Only 8% of the fellows were found to be "not properly utilized" on return to their countries. Later, in 1970, an article in the WHO Chronicle stated that:

"A recent large-scale review of regional evaluations of the fellowship programme confirm that in the great majority of cases fellowships have been appreciated by governments an that they have conferred great and lasting benefits on the countries concerned."[55]

The WHO Executive Board, evaluating the fellowships programme in 1975, concluded that:

"From this [1970] review it appeared that about 60% of fellowships could be classed a successes, 4% as failures and 35% either as partial successes or impossible t classify."[56]

It concluded from this that:

"the programme continues to maintain its flexibility so that it can meet the immediate needs of countries and at the same time support the general long-term policies of the Organization".[56]

In 1974, the contribution of WHO to the evolution of medical education in Africa during 1962-1972 was studied. To do this, documents of the WHO African Region produced during this period of time were examined. The principal conclusions were as follows:

"WHO made a valid attempt to define and recognize the problems related to the development of medical education in the African Region... WHO made a valid attempt to find solutions to the previously elicited problems. Those solutions have been regarded as sound by the Member States, taking into consideration the constraints due to very different and sometimes antagonistic political situations in each state... WHO had a favourable impact on the development of medical education in the African region through the implementation of its policies either directly or through the action of Member States."[57]

As part of the current study, it was decided to explore the general influence of WHO on HMD policies and programmes in countries through a questionnaire survey of knowledgeable health professionals around the world in 1980. The names of persons surveyed were acquired from the WHO Expert Panel on Health Manpower and from suggestions by the regional offices. An initial mailing went to 428 such persons, but questionnaires were subsequently also sent to others (mainly in the African Region) by regional offices and WHO country representatives. The precise number in this second group is not known, but the total sample came to approximately 500. Usable responses were received from 170 persons, about about 34% of the total. The questionnaire solicited expert opinion on: (a) the relevance of WHO's HMD programme to each country's HMD needs, (b) the impact of WHO on the country's HMD programme, and (c) suggested appropriate future HMD activities by WHO.

The 170 respondents came from 74 countries or nearly half of the WHO Member States. Applying a classification of countries used by the World Bank, the respondents were distributed as follows:

Developing low-income countries	54
Developing middle-income countries	51
Oil-rich developing countries	13
All developing countries	118
Industrialized countries	41
Countries with centrally planned economies	11
Total	170

About 50% of the respondents were past (22%) or current (30%) staff members. With respect to health manpower experience, 43% were involved in education and training while 24% were concerned with other aspects of HMD, and 33% were not primarily from this field.

The nature of responses on various HMD questions naturally differed among persons from the several types of country. Certain overall findings, however, are of interest. The general contribution of WHO's HMD programme to the country's HMD efforts was regarded as having increased steadily since 1950, and it was expected to be of greater value in the future. The major reasons for this trend were said to be the influence of WHO ideas and concepts, along with the increasing interest of national authorities.

As we have observed in previous chapters, the major objectives of the Organization's HMD rogramme have changed over the years. Considering the predominant objectives in different eriods, respondents were asked to rate the extent of the achievement of these objectives in heir countries. The results are shown in Table 8, with respect to 10 general objectives. t is evident that for none of the 10 objectives during the three periods did a majority of he respondents consider that it was fully or mostly achieved; at this level, the percentage f achievement ranges from 14% to 34%, and it is principally around 25%. It may also be oted, however, that if a rating of "somewhat" is added to "fully or mostly", the level of chievement of objectives is reported as being greatest for the recent period 1976-1980; for his period, the assessment of non-achievement averages 21%, compared with averages of 36 and 9% for the two previous periods.

Table 8. Achievement of WHO's HMD objectives as estimated by 170 respondents from 74 countries, 1948-1980

WHO/HMD Objective	Achievement (percentage of responses)			
	Fully or Mostly	Somewhat	Not at all	Total
1948-1967				
Reduction of health personnel shortage	24	42	34	100
Higher quality of medical education	23	33	44	100
1968-1975				
Training national health personnel	27	44	29	100
Strengthening teacher-training	26	41	33	100
Improved continuing education	16	39	45	100
1976-1980				
Manpower suited to service needs	34	54	12	100
Implementation of integrated HSMD	25	56	19	100
Strengthening of manpower planning	21	59	20	100
Developing primary care teams	22	54	24	100
Improved manpower management	13	59	28	100

Regarding the current HMD programme, the great majority of respondents from all types of country assessed its policy objectives to be appropriate to their country's needs. Of these positive respondents, however, about one-third thought that WHO activities to achieve these objectives were not carried out properly.

With respect to major WHO objectives recommended for the coming 10 years, certain differences among countries of different types are interesting. If future objectives are classified as related to planning, production, and utilization of health personnel, the distribution of priorities expressed by respondents from different types of country is as follows:

Type of country	Priority			
		Production		
	Planning	Quantity	Relevance	Utilization
Developing low-income	High	Highest	High	High
Developing middle-income	High	Highest	High	High
Oil-rich developing countries	-	Highest	-	-
Industrialized	Highest	-	-	High
Centrally planned	High	-	High	-

has the highest priority in all three types of developing country for the next 10 years is greater (quantitative) output of health personnel. However, most frequently wanted are auxiliary or primary health care workers and not physicians or nurses. In the industrialized (free-market) countries, however, improved planning is clearly the highest priority. In the centrally planned (socialist) countries, there is a shared and moderately high priority for certain aspects of planning, and for the relevance but not the quantity aspect of production. Planning and utilization are of high priority, along with relevance, in low and middle-income developing countries, i.e., in the majority of Member States of WHO.

With respect to the interpretation by respondents of their country's HMD objectives in relation to those of WHO, the vast majority in all five types of country thought they were essentially congruent (i.e., concordant or similar). The largest dissent from this prevailing opinion came from 32% of industrialized-country respondents and from 30% of respondents in oil-rich developing countries.

Respondents were also asked their opinion about the extent of WHO's influence on their country's HMD programme over the years. The answers could be recorded as (1) most important, (2) essential, (3) helpful, or (4) negative (i.e., none, harmful, unproven, or nonexistent). Opinions clearly differed among respondents from the various types of country. In the developing countries of both low-income and middle-income levels, the most frequent opinion was that WHO influence was essential, and this rating tended to increase over the years from 1950 to the present, and even further with projection into the future. For the low-income developing countries, the "essential" rating of WHO influence was highest at all times, but rose from 33% around 1950 to 50% in 1980 and 61% for the future. For the middle-income countries, the equivalent percentages were 36, 50, and 57. For the oil-rich developing countries they were zero around 1950, rising to 44 in 1980 and 71 for the future. In industrialized countries, on the other hand, WHO's work was seldom rated as essential; instead the commonest rating by far was "helpful" - this rising from 47% around 1950 to 67% in 1980, and then declining to 57% for the future. All in all, respondents from the three types of developing country considered WHO's HMD influence to have increased significantly over the years, and those from centrally planned countries shared this view. In the industrialized countries, however, the influence was predominantly regarded as fluctuating or basically unchanged over the years.

An assessment of WHO's impact on HMD policies and practices in countries may also be based on the field studies of the six countries reported in Chapter XII. All six were developing countries; two of them (Ethiopia and Indonesia) in the low-income category used above, three (Malaysia, Costa Rica and Barbados) in the middle-income category, and one (Gabon) in the oil-rich category.

The overall influence of the HMD programme on these countries, it will be recalled, was regarded favourably. In the two low-income developing countries, WHO had played a distinct role in the establishment of training programmes for auxiliary health workers to provide primary care in rural areas. The renowned Gondar Public Health College in Ethiopia had received WHO collaboration from its beginning, and in both of these low-income countries the Alma-Ata Conference of 1978 made a distinct impact. Much of WHO's influence in these countries was regarded as conceptual, including the emphasis on the importance of prevention and the value of health teams. Some years ago, WHO had been of assistance in the strengthening of medical education and in streamlining the training of nurses.

In the three middle income developing countries, WHO had also played a significant role. The important Rural Health Services Scheme of Malaysia contained a major component for training health auxiliaries, and this had been developed with WHO collaboration. In Costa Rica, WHO's conceptual influence was a crucial factor in national acceptance of a programme for training auxiliary primary health workers that had been pioneered by an innovative local physician. On the other hand, some previous WHO advice on nurse education led to an upgrading of standards which may have been counterproductive. Similar advice in Barbados for the separation of nursing education from the health services and making it more academic may have been unsound; but WHO's conceptual emphasis on the importance of primary health care probably played a part in the planning of a national health service in that country.

In Gabon, the oil-rich developing country, WHO played specific roles in launching first a school for training nurses, midwives, and other health personnel, and then a university centre for training physicians and other members of the health team. Problems in planning and coordination are prominent here, in spite of the sudden wealth from oil.

All six countries in the field study look ahead to further collaboration from WHO through workshops, consultants, and fellowships. There is a general desire by these countries for closer participation in the selection of workshop topics, and there seems to be great and growing interest in health manpower planning, and management, as well as in training in health management. Fellowships have been universally regarded as helpful, despite general complaints about excessively bureaucractic procedures in arranging them and some infrequent but inappropriate types of training experience. Spokesmen from all the countries alluded to the generally valuable influence of WHO as a prestigious international body; because of this, even more collaboration from WHO was sought by health officials, in order to fortify their efforts to win greater support from their own governments.

Regarding the question posed to each person interviewed about his country's possible influence upon WHO policies or programmes, no one in any of the six countries was able to identify any such impact. It is hard to know whether these barren responses reflected modesty, whether they simply were due to non-participation by the persons interviewed in WHO governing bodies, or whether other factors were involved. It seems likely that the process of interaction between countries and WHO, which, as discussed earlier, leads to WHO policy formulation, is very gradual, long-term, and subtle. It is not the type of sharp, explicit impact that one could expect to elicit from short interviews.

The essential meaning of these findings resulting from various efforts to study the influence of WHO on HMD policies and programmes in countries is difficult to interpret. One can say that, in general, health manpower policies in developing countries have been more or less congruent with the main thrusts of WHO, at least as far as the declared policy objectives are concerned. (We know that, in practice, declared national health policies are not always fully implemented.) How much of this congruence is actually due to WHO's influence is not clear, but a perception of this influence seems to have heightened in recent years. In the more developed countries, HMD policies when they exist, may also be congruent with those of WHO, but little of this congruence seems to be attributable by respondents to WHO influence, as such.

Recalling our discussion in Chapter II about the development of WHO policies and programmes from a dynamic interaction between Member States and the Organization, these findings should not be surprising. The process of this interaction is continuous and subtle, and it takes place in the midst of many other social and political forces operating in countries. There is broad consensus, particularly in the developing countries, that WHO is a prestigious and competent international body. Its views or the views associated with it - as expressed through official resolutions, but also as transmitted by consultants or at workshops or in the reports of expert committees - are regarded as authoritative and sound. Policies and programmes in countries obviously depend upon the decisions of national leaders, but - in ways that are very difficult to measure - the formulation of those decisions results from influences of multiple sources. WHO is clearly one of those sources. With WHO's deliberate priority for work in the developing countries, it is not surprising that those countries should be most conscious of WHO influence. And as WHO grows in experience and maturity, the extent of its impacts seems gradually to increase.

COMMUNITY HEALTH CELL LIBRARY AND INFORMATION CENTRE
HP-120
09285

References

1 World Health Organization. World directory of medical schools, 5th ed. Geneva, 1979, p. 357.

2 Bui-Dang Ha Doan, J. World trends in medical manpower, 1950-1970. World health statistics report, 27 (2): 84-108 (1974).

3 World Health Organization, Division of Health Statistics. Selected health resource indicators: physicians by continent, geographic region and WHO Region. Geneva 1980. (Unpublished document)

4 Bui-Dang Ha Doan, J. World trends in medical manpower, 1950-1970. op. cit., p. 91.

5 Bui-Dang Ha Doan, J. Statistical analysis of the world health manpower situation circa 1975. World health statistics quarterly, 33 (2): 127-150 (1980).

6 Bui-Dang Ha Doan, J. Specialization of physicians: levels and trends in some industrialized countries. World health statistics report, 30 (3): 207-226 (1977).

7 Mejia, A., Pizurki, H. and Royston, E. Physician and nurse migration: analysis and policy implications. Geneva, World Health Organization, 1979, pp. 27-56.

8 Bui-Dang Ha Doan, J. Statistical analysis of the world health manpower situation circa 1975, op. cit., p. 144.

9 World Health Organization. World health statistics annual. Vol. III Health personnel and hospital establishments, 1977. Geneva, 1979, pp. 82-84.

10 Roemer, M.I. Evaluation of community health centres. Geneva, World Health Organization, 1972 (Public Health Papers No. 48).

11 World Health Organization. World directory of schools of public health, 1971, Geneva, 1972, p. 9.

12 Morris, J.N. The uses of epidemiology. Baltimore, Williams & Wilkins, 1964.

13 Myrdal, G. Beyond the welfare state. New Haven, Yale University Press, 1960.

14 World Medical Association. Proceedings of the First World Conference on Medical Education, London, 1953. London, Oxford University Press, 1954.

15 World Medical Association. Medicine: A lifelong study, proceedings of the Second World Conference on Medical Education, Chicago, 1959. New York, World Medical Association, 1961.

16 World Medical Association. Medical education in the service of mankind: Proceedings of the Third World Conference on Medical Education, New Delhi, 1966. Journal of medical education, 43 (2): 97-319 (1968).

17 World Medical Association. Educating tomorrow's doctors: Fourth World Conference on Medical Education, Copenhagen, 1972. New York, World Medical Association, 1972.

18 Grundy, F. & Mackintosh, J.M. The teaching of hygiene and public health in Europe. Geneva, World Health Organization, 1957 (Monograph Series No. 34).

19 Ibid., p. 57.

20 Association of Teachers of Preventive Medicine. Preventive medicine in medical schools: report of Colorado Springs Conference, November 1952. Journal of medical education, 28 (10), Part 2 (1953).

21 Deuschle, K.W. & Eberson, F. Community medicine comes of age. Journal of medical education, 43 (12): 1229-1237 (1968).

2 Conference on Teaching of Preventive Medicine, Shiraz, Iran, May 1961. Shiraz, Iran, Central Treaty Organization (CENTO), 1961, p. 11.

3 University of Lucknow. First ten years, 1958-1968, of Department of Social and Preventive Medicine, King George's Medical College. Lucknow (India), 1969.

4 Maegraith, B. One world. London, Athlone Press, 1973, pp. 47-75.

5 Garcia, J.C. La educacion médica en la América Latina. Washington, DC, Organizacion Panamericana de la Salud, 1972, pp. 86-171. (Publicacion Cientifica No. 255)

6 Ibid., p. 161.

7 Sai, F.T. West Africa. In: Purcell, E., ed. World trends in medical education: faculty, students, and curriculum. Baltimore, Johns Hopkins Press, 1971, pp. 117-126.

8 Cuyegkeng, J. The Philippines. In: Purcell, E., ed. Ibid., p. 132.

9 Roemer, M.I. & Roemer, R. Health manpower policies under five national health care systems. Washington, DC, US Department of Health, Education, and Welfare, 1978, pp. 14-17 (Publication No. HRA 78-43).

0 Silberstein, E.B. & Scott, C.J. An evaluation of undergraduate family care programs. Journal of community health, 3 (4): 369-379 (1978).

1 Eisenberg, J.M. Postgraduate training for general practice in the United Kingdom. Journal of medical education, 54 (4): 314-322 (1979).

2 Donald, A.G. A decade of development in postgraduate training for general practice. Health bulletin, 37 (6): 255-260 (1979).

3 Katz, F.M. & Tiddens, H.A. Progress of the global teacher training programme: 1969-1979". Geneva, World Health Organization, (1979) (Unpublished document WHO/EDUC/79.178).

4 WHO Technical Report Series No. 608, 1977 (Criteria for the evaluation of learning objectives in the education of health personnel; report of a WHO Study Group), p. 24.

5 Duvillard, M., Guilbert, J.-J., & Vysohlid, J. Survey on use of learning objectives. Geneva, 1980, pp. 1-2. (WHO unpublished document).

6 Deliege, D. Aurons-nous trop de médecins? Perspective d'avenir par régime linguistique. Bruxelles, Université de Louvain, 1978.

7 World Health Organization. Sixth report on the world health situation 1973-1977, Part I: Global analysis. Geneva, 1980, pp. 187-188.

8 Leowski, J. Health services in Poland. Warsaw: Polish Medical Publishers, 1974.

9 World Health Organization, Division of Health Statistics. Selected health resource indicators: physicians by continent and country, Geneva, 1980 (Unpublished paper).

0 Bui-Dang Ha Doan, J. Statistical analysis of the world health manpower situation circa 1975, op. cit., p. 137.

1 Editorial de Ciencias Sociales. Diez anos de revolucion en salud publica. Havana, Instituto del Libro, 1969.

2 Vayda, E., Evans, R.G., & Mindell, W.R. Universal health insurance in Canada: history, problems, and trends. Journal of community health, 4: 217-231 (1979).

3 World Health Organization. Sixth report on the world health situation 1973-1977, Part I: Global analysis. op. cit., p. 183.

4 World Bank. Health; sector policy paper. Washington, DC, 1980, p. 11.

45 See, for example: McKeown, T. The role of medicine: dream, mirage, or nemesis London: Nuffield Provincial Hospitals Trust, 1976.

46 World Bank, op. cit., p. 11.

47 Fülöp, T. & Reinke, W.A. Statistical analysis of interdependence of country health resource variables, with special regard to manpower-related ones. Bulletin of the World Health Organization, 59 (1): 129-141 (1981).

48 Illich, I. Medical nemesis: the expropriation of health. London, Calder and Boyars, 1975.

49 World Health Organization. An evaluation of the WHO programme for education and training (1948-1966): report of an Advisory Group Meeting, Geneva, 14-18 November 1967. Geneva, (1968) (Unpublished WHO document PE/68.1).

50 World Health Organization. Education and training study. Geneva, 1967. (Unpublished WHO document PE/ET/67WP/4, Restricted), 1967.

51 Ibid., pp. 116-126.

52 World Health Organization. An evaluation of the WHO programme for education and training, op. cit., pp. 6-7.

53 WHO Official Records No. 87, 1958, pp. 434-449.

54 Ibid., p. 444.

55 The WHO fellowship programme. WHO Chronicle, 24 (10): 475 (1970).

56 WHO Official Records No. 223, 1975, pp. 105, 106.

56 Guilbert, J.-J. Contribution of the World Health Organization to the evolution of medical education in the African Region, 1962-1972: a content analysis of policy statement documents. Geneva, World Health Organization, 1974, p. 112 (Unpublished WHO document HMD/STT/74.4).

PART FOUR

SUMMARY AND CONCLUSIONS

Chapter XIV

SUMMARY OF THE PAST AND LOOKING AHEAD

This study of international health manpower policy has tried to analyse this policy's development in countries and in the World Health Organization since WHO's founding in 1948. The analysis has been made against a background of political and social forces at play in the world during these last three decades. Events in countries have led to many modifications over the years in policies and programmes for health manpower development (HMD). Through the dynamic interaction between countries and WHO, HMD policies in WHO have naturally undergone change. As a forum for the interchange of national experiences, WHO serves as both a conduit and a catalyst for new and changing ideas.

In this final chapter we shall try to summarize the pathways of programmes directed to specific objectives, as they have been marked out by changing policies both in countries and in WHO. We shall examine the operations of the entire HMD process, as it has been observed in a small sample of countries. We shall note the highlights of quantitative trends in the world's total health manpower supply, and try to epitomize trends in manpower performance and relationships to overall health care systems - including relationships to the population's health status. We shall take note of what little we know about the influence of WHO in all these developments. Finally we shall attempt to look ahead. In what ways can HMD trends of the past guide us towards sound policy formulation in the future ?

Past developments in HMD policy

Growing out of organized international health activities starting in 1851, the World Health Organization took shape after the Second World War, in 1948. Learning lessons from its predecessors (particularly the Health Organization of the League of Nations), WHO was formed as an autonomous body - yet as one of the specialized agencies brought into relation with the United Nations. More important than its differences in form were its far broader scope of objectives and functions than those of earlier international health organizations. No longer limited to such issues as the cross-national spread of communicable diseases, WHO's central objective became "the attainment by all peoples of the highest possible level of health".

The administrative structure of WHO, with its World Health Assembly, Executive Board, and Secretariat - the latter including headquarters and six regional offices - facilitated a dynamic process of policy formulation that grew out of the constant interaction between WHO and its Member States. Influences flowed in both directions on the many aspects of health with which WHO is concerned. From the outset, WHO collaborated with countries on strengthening the training of health personnel. The administration of this work was primarily the responsibility of a Division of Education and Training, which after some two decades evolved into a Division of Health Manpower Development.

The formulation of policies and their implementation through programmes depend on a process that should start with the identification of problems. The precise way that a problem is perceived and articulated has a great influence on the policy objective that will be proposed for solving it. In HMD. if a problem is perceived as a national shortage of physicians, that will lead to policies and programmes very different from those growing out of the same problem perceived as the non-availability of primary health care for rural populations. The changing identification of problems over the years, therefore, has led naturally to the formulation of changed policy objectives. As new policy objectives emerged, the old ones did not necessarily die out, but they often tended to recede to a lower priority, while the new ones attracted greater attention both in WHO and in its Member States.

An analytical review of HMD problems identified over the years 1948-1980, and of the policy objectives formulated in response, reveals a complex evolution. Since the nature of the problems is implicit in the policy objectives formulated to tackle them, accounts of the latter tell us a good deal about the former. Thus, in very rough chronological order, HMD policy objectives in WHO have evolved since 1948 approximately as follows:

1. Increased quantity of conventional health personnel
2. Improved quality of all types of health personnel
3. Cross-national equality of health personnel training
4. Geographic coverage of countries with health personnel
5. Efficiency in production and use of health manpower
6. National planning of health manpower
7. Relevance of health personnel to national needs
8. Integration of health services and health manpower development.

It must be emphasized that the later objectives did not always entirely replace the earlier ones, but mainly supplemented them - also usually acquiring higher priority. For the achievement of some policy objectives, such as relevance, several specific HMD programmes might be implemented, as we shall see. Likewise one HMD programme, such as the training of health auxiliaries, could contribute to the attainment of several policy objectives.

In order to trace the evolution of policy objectives, and the corresponding programmes it is helpful to consider events between 1948 and 1980 in terms of four time-periods. Even though, as noted above, the first step in the process of policy formulation - problem identification - starts in countries, and likewise action programmes are naturally implemented within countries, a convenient periodization of the 33-year time-span can be based on the instrument of periodic planning known as the General Programme of Work covering a Specific Period. Accordingly, four periods can be conceptualized as follows:

Period	Years	General Programmes of Work
I	1948-1951	None
II	1952-1961	First and Second
III	1962-1972	Third and Fourth
IV	1973-1980	Fifth and part of Sixth

These time periods are helpful not only for tracing developments in WHO's programmes and those of its Member States, but also for relating these developments to larger world events, social and political. These events have inevitably influenced strategies within countries, relationships between countries, and the whole dynamics of WHO. Accordingly, on the basis of the above periodization, what have been the developments with respect to each of the eight HMD policy objectives listed above ?

Quantity objective. Reviewing the trend across thirty years, we find that the objective of increasing supplies of conventional health personnel (primarily physicians and then nurses) was clearly the number one priority in the early days of WHO - in Period I (1948-1951) and also in Period II (1952-1961). This objective was promoted by virtually all techniques in the WHO roster of working methods - by fellowships, expert committee and other meetings, short-term and long-term consultancies, provision of equipment and supplies, numerous publications, etc. In Period III (1962-1972) the priority of this objective was noticeably lowered by reason of higher importance becoming attached to the training of other types of personnel, as well as greater stress being put on the characteristics of the physicians and nurses produced, as distinguished from their mere number. In Period IV (1973-1980), the quantity objective, along conventional personnel lines, declined in importance in WHO policies although the effects of previous momentum towards this goal still continued - but at a lower level - in most countries, both developing and industrialized. The establishment of medical and related professional schools was proving very expensive for developing countries, and the graduates of these schools, in any event, were in most cases not meeting population needs for health care; training other types of personnel held greater promise.

Quality objective. Considering the quality objective in the WHO health manpower programme as a whole, its early formulation was inevitably influenced by the perception of problems growing out of the devastation of the Second World War, and then out of the rise of many newly independent nations that had recently been colonies. The pride of those nations, asserting that they would not accept second class standards, combined with traditions of academic excellence in the highly affluent countries, yielded a period in the 1950s, when

high quality standards (by which usually standards of the highly developed countries were understood) in all types of professional education of health personnel became a major objective. (There were indeed quality deficiencies health professional education in some developing countries - highlighted by criticism from local upper-class families and from leaders of the medical profession.) This approach continued into the early 1960s, but then - as other manpower considerations became more prominent in the later 1960s, such as population coverage and manpower planning - quality goals receded. By the mid and later 1970s, conventional quality objectives had become more manifestly irrelevant and merged into advocacy of relevance of education to health service needs and through them to the health needs and demands of the population

Equality objective. An objective articulated in Period I was cross-national equality of the training, and even the licensure, of health personnel (particularly physicians). During Period II, the same issue formulated as minimum international standards of medical education was still being raised, but the only action taken by WHO governing bodies was to call for study of the question. Such a study was not reported until 1963, in Period III; in spite of the elasticity of the recommendations, however, little definite WHO action was taken on the issue, except for the proposal of a somewhat vague definition of a physician. In Period IV, the issue of equivalence of degrees became concentrated on collaboration with UNESCO for mutual recognition of degrees, qualifications, and diplomas in the health field; there was also a call for the study of basic models of medical curricula. In the meantime a new and essentially opposite problem - the brain drain of skilled health manpower from the less developed to the more developed countries was identified. WHO conducted an extensive study of the worldwide migration of physicians and nurses - demonstrating that market forces essentially determined the flow of these personnel from countries overproducing them, in relation to their economic capacity to absorb their services (regardless of objective health needs), towards countries underproducing personnel in relation to their greater economic capacity to absorb them. Clarification of these realities may have helped to cause a reduction of the brain drain problem in the late 1970s, and a greater appreciation of the importance of training the health manpower - in types and numbers - and of qualifications and competencies most appropriate to the needs of each country.

Coverage objective. The development of WHO policy towards an objective of total population coverage with appropriate health manpower evolved through stages that can be defined rather clearly. In Period I (1948-1951), the need for extending health services to rural populations was explicitly identified, but the training of auxiliary health workers was slight in extent and limited largely (with a few exceptions) to rather narrow functions in fields such as midwifery and sanitation. There was little, if any, recognition of the value of health auxiliaries to achieve population coverage. In Period II (1952-1961), as developing countries acquired a stronger voice in WHO, programmes for training auxiliary health workers with broader functions were more widely promoted, but the policy issue remained quite controversial. Only a few countries, such as Ethiopia and Malaysia, organized impressive programmes - at least in concept, if not in actual achievement - for training auxiliaries to provide rural health services. In Period III (1962-1972), as the deficiencies in rural population health care coverage very obviously persisted, the objections and uncertainties about the training and utilization of auxiliary health workers gradually but definitely declined. The long-established feldsher of the USSR was accorded greater worldwide interest. In some developing countries, nevertheless, previous progress towards greater population coverage was, in a sense, hampered by a policy of upgrading medical assistants to the status of fully-fledged physicians (in spite of their customary urban concentration). Period IV (1973-1980), however, saw the clear emergence, as a top priority objective in most developing countries, of total population coverage with personnel appropriate for providing health care based on primary health care. The international consensus of public health leadership achieved at the Alma-Ata Conference of 1978, and even the belated recognition of the potential value of practitioners of traditional medicine in many developing countries, contributed to this policy trend. By 1980, total population coverage with health services was recognized as an essential objective that most developing countries could attain soon enough only by a rapid expansion of programmes for the training and use of non-conventional, multipurpose auxiliary health personnel.

Efficiency objective. Several strategies in WHO's programme for the development of health manpower field have had the objective of enhancing efficiency - implicitly if not explicitly - in the performance and training of personnel. These strategies have involved programmes to promote the development of health auxiliaries, health teams, health management, and health personnel teacher training. Each of these activities has, in turn, evolved over the years towards objectives different from those envisaged in the beginning. Thus, the use of health auxiliaries was initially motivated by an objective of efficient or non-wasteful provision of health services - which later evolved towards a predominant objective of total population coverage with health services based on primary health care. In some countries, this was originally regarded as a temporary expedient until enough physicians could be trained, but in most countries health auxiliaries came to be regarded as having a permanent place in health care systems. The strategy of personnel coordination through health teams was designed initially to provide the necessary supervision of auxiliary health workers, but it evolved in time towards a much larger objective of achieving efficiency in the functioning of all health personnel. The strategy of training in management was oriented, among other things, towards the management of health personnel as such (career structure, working conditions, etc.) so that they would perform efficiently; the main objective, however, was increasingly focused on training for effective management of total health systems. Finally, the strategy for training teachers of health personnel was conceived initially to meet the major goal of pedagogical efficiency, so that the teacher's efforts yielded maximum student learning; soon, however, its predominant goal became designing educational programmes which facilitate learning with maximal relevance to the health service needs of each country.

Planning objective. For numerous social and political reasons, the role and importance of general health planning, and health manpower planning in particular, were hardly recognized in the first two Periods (1948-1951 and 1952-1961) of WHO. Then, with the somewhat belated appreciation among non-socialist countries of the value of planning, in Period III (1962-1972) WHO began to promote general planning activities, including HMD programmes with a planning objective. In Period IV, it was gradually recognized that purely technical planning procedures - not realistically related to the total national political and economic scene - seemed to have little impact on health policy decision-makers. There evolved in this period a broader concept of the total health manpower development process, in which manpower planning became regarded as one component linked integrally to the production and management of health personnel, for the purpose of providing needed health services.

Relevance objective. Many activities linked to the objectives discussed above implied also a goal of relevance, but beyond them numerous other educational programmes were directed towards increasing the relevance of health personnel to society's needs. Strengthening of instruction in preventive and social medicine was one early strategy of this sort; by the 1970s, however, this particular approach was replaced by other broader ones. As special health issues became prominent - such as radiation hazards or mental and related disorders - emphasis on their incorporation into medical education was another form of advocating relevance. Efforts to achieve more effective methods in the teaching/learning process had started with an objective of efficiency, but they evolved after about 1973 into a strategy for achieving relevance in education. Finally, in reaction to excessive specialization in medicine, there arose in many countries and in WHO a call for greater attention to general medical practice and to training students outside the hospital setting. After about 1975, all these forces developed into a significant movement in certain countries, and vigorously in WHO, to achieve comprehensive reform and reorganization of health personnel education, to ensure relevance to the true health needs of communities. In spite of all this, the objective of relevance is far commoner in rhetoric than in reality, and vast challenges must be faced to convert the concept into everyday HMD practice.

Integration objective. The formulation in WHO of an objective to adapt health manpower development policy and practices to the needs of the health services - to integrate health services and manpower development (HSMD) - gradually emerged as the culmination of several previous objectives. Obvious though this principle of integration may seem, on grounds of logic, the development of the two sectors - education of health personnel and health services - along two separate historical paths created problems almost everywhere in the world. Yet, in the early years of WHO (Period I) the HSMD objective was implied in various official deliberations; in Period II, the need for integration had already become explicit. By

Period III, the integration concept was theoretically supported, but it still did not lead to any programme action. Both in WHO governing bodies and in the Member States, there were many forces defending independence and autonomy for educational institutions. In the meantime, various types of integrated activity were being carried out in special projects and in certain countries with respect to health manpower planning, production, or management. In some countries definite administrative mechanisms were established to integrate the two sectors at the national level; in others there were local demonstrations of integration. Finally in Period IV, the HSMD concept matured to the point at which it received specific formulation and was then generally accepted as the major long-term objective of WHO manpower policy. It embodied the idea of integration not only within health manpower development (planning, production, and management) but also between the entire HMD process and health services development as a whole. Through World Health Assembly resolutions, WHO General Programmes of Work, expert committee reports, and similar channels, it was decided that the ultimate determinant of health manpower planning, production, and use should be the requirements of each country's well planned health services development.

- - - - - - - - -

This completes our analytical review of the development of HMD policies in WHO and Member States over the years 1948-1980. Along the pathways towards these eight policy objectives, evolutions can be traced from conventional towards innovative ideas, from mechanistic adoption of foreign models towards concepts of greater relevance or adaptation of HMD strategies to the true health needs of each country. We know that in the world diverse actions pursuant to all or most of the eight objectives have been going on at the same time. How did these multiple activities interact ?

In order to attempt to answer this question, field studies of the entire HMD process were made in the six selected countries reviewed in Chapter XII. Through numerous on-the-spot interviews, observations, and data collection, the process of health manpower planning, production, and management, could be described in a horizontal sense - that is, with accounts of programmes directed towards various goals operating side-by-side.

HMD experience in selected countries

As has been noted in Chapter XII, to gather insight on the overall operation of the HMD process in countries, six nations with different settings were selected. All were developing countries, but illustrating a wide range of socioeconomic development. On the basis of measurements of their national wealth (gross national product or GNP per capita), their literacy rates, and male life expectancies at birth, a composite P/L/E index of development was calculated for each country. In their ranking order according to this index, the six countries studied were:

Country	P/L/E index
Ethiopia	16.5
Indonesia	39.1
Malaysia	50.0
Gabon	51.4
Costa Rica	60.9
Barbados	70.8

While there are obviously many differences among these countries beyond GNP, literacy, and life expectancy, the index composed from these three indicators shows them to vary in their levels of development by a range of more than 4:1.

In all six countries, there has clearly been recognition of the need for the entire HMD process to be relevant to the implementation of overall national health plans, even when there have been manifest deficiencies in that process. Deficiencies may characterize the planning, the production, or the utilization component of the process, or of two or even three of these. There are generally also difficulties in coordination among the three components of the HMD process. A crucial determinant of the overall functioning of the HMD process, as well as its integration with the development of the nation's total health services, seems to be the degree of the nation's commitment to public responsibility for

health care. Where this commitment is strong, there seems to be a greater determination to overcome problems and to plan, produce, and use the health personnel that are ultimately required to meet health needs.

In two of the countries (Ethiopia and Barbados), the political commitment to a comprehensive governmental health care system appears to be very strong, while in two others (Malaysia and Costa Rica), this political commitment may be described as moderately strong. In the last two countries (Indonesia and Gabon), one may say that the political commitment to public responsibility for health care is less strong than in the other four countries.

In all six countries there have been many achievements and there are, of course, many persistent problems. In all but one (Barbados, a small island) there are still serious rural handicaps. Preventive and curative services are not well integrated in any of the countries, although this is being worked towards in all except Indonesia and Gabon. Excessive specialization characterizes two of the countries (Costa Rica and Barbados - the two most highly developed), in the face of unmet needs for primary care and even wasteful use of specialist time for such care. Certain educational institutions in all six countries put an inappropriate emphasis on sophisticated specialty training at the expense of adequate attention to the output of primary health personnel. Inequities of a greater or lesser extent - in the use of overall national resources - tend to be caused principally by the operation of a private market for the sale of health services.

WHO has collaborated with all six countries in their efforts to reduce many of these problems. The quality of WHO's collaboration is generally assessed favourably in all the countries, although criticisms of some bureaucratic procedures are common (particularly with regard to the administration of fellowships). All countries seem to be eager to contribute more actively to the selection of subjects on which WHO workshops and symposia are held. Training in health services management has high priority. With respect to the future, all six countries seek continued collaboration with WHO in HMD - particularly in the planning and management components. Collaboration in health manpower production seems to be less frequently sought (perhaps because training programmes are fairly well developed), except in Ethiopia, which seeks collaboration in this component also. In none of the countries, however, was any respondent able to say in what way his or her country had influenced the policies or programmes of WHO.

The effectiveness of WHO's collaborative work in contributing to the improvement of national health systems or the development of their manpower, was beyond the ability of the investigators or anyone interviewed to judge. In all six countries, nevertheless, there have manifestly been objective health improvements over the last 30 years. Even though problems persist in all areas of health, WHO efforts have tended to support the work of competent national authorities and personnel to reduce those problems. There can be no doubt that progress in countries depends far more on the dedication, political commitment, and competence of national health workers than on the input of any international agency, no matter how well done. One can still surely conclude, however, that - both in its direct performance and in its conceptual and promotive influence - WHO has usually worked on the side of progressive endeavours to achieve greater equity in the health sector of all six countries.

Although the six countries studied in the field were sufficiently diverse to yield the general observation offered above, they did not, of course, constitute a representative sample of the 156 Member States of WHO. To learn about health manpower trends in the world as a whole, it was necessary to undertake studies along other lines.

World trends in health manpower

On the basis of statistical data available to WHO, compiled from reports submitted by countries, it was possible to describe some recent trends in the supplies and ratios to population of certain types of health personnel. Through inferences that may be drawn from a variety of information sources, it was also possible to describe certain trends in health personnel performance (quality, efficiency, and relevance, as defined earlier), as well as trends in larger social policy issues - such as health manpower planning, population coverage, and the integration of health services and health manpower development. Trends in the health status of populations of the developed and developing nations could also be delineated

from available data, and statistical correlations could be explored on relationships to socioeconomic indicators as well as indices of health manpower. From interviews and a questionnaire survey of expert opinions, some estimates could be offered about the perceived influence of WHO in the development of HMD policies and programmes in countries.

From these several sources of information, one may conclude that there are many indications of a worldwide movement towards greater and more forthright efforts to plan, educate, and make more reasonable use of health personnel. On the whole, the numbers of physicians, nurses and, in general, of health workers - and their ratios to population - have increased throughout the world, but these increases have been extremely uneven between the developed and the developing countries. There is still a severe shortage of all categories of health workers, but expecially of physicians, in many of the developing countries as well as outflow of trained health workers from developing to developed countries and concentration of those workers in cities. Experience has also shown that by simply training more of the same, more physicians and nurses, etc. unmet health needs of very large population groups in those countries will not be met in the foreseeable future. With respect to efficiency, there has been an increase in the use of health teams and of trained auxiliary personnel within them - even though the pace has been far less than the obvious needs. More personnel have also been trained in the management of health manpower and services. The real health needs of developing countries, nevertheless, remain vastly beyond the capabilities of current health manpower resources to cope with them.

With respect to the relevance of health personnel training to actual needs, there is evidence of some improvement as reflected, for instance, in the expanded teaching of preventive and social medicine in both developed and developing countries. This is not, of course, to suggest that PSM teaching is the panacea for the problem of irrelevance. In developed countries, an earlier rapid trend towards excessive medical specialization became slowed down around 1970, as a movement arose for strengthening general or family practice. A slow but definite appreciation of the value of teacher training in schools of medicine and nursing seems to be developing in all Member States. A small but growing fraction of medical, nursing, and other schools of health personnel have been reorganizing their entire educational programmes towards achieving much greater orientation to community health needs.

Although techniques of health manpower planning have often been unsuccessful, many countries have acquired greater consciousness of the value of quantifying their supplies and distribution of health personnel; studies have been showing shortages or surpluses in various fields, sometimes stimulating corrective actions. In recent years much greater coverage of populations with some suitable type of personnel has become formulated as a national objective; most often, a strategy of training many more auxiliary workers for primary health care has been launched in order to attain this goal. This strategy has led to remarkable achievements in certain countries, but the worldwide picture is yet far from being bright. In any event, much remains to be done to reach the main social target of "Health for all by the year 2000", formulated first in 1977 by the World Health Assembly (resolution WHA30.43) and reiterated and reinforced, along with the concept of primary health care as a key to its achievement, at Alma-Ata in 1978. In order to bring about closer integration between health manpower and health services development, coordinated administrative actions have been taken in numerous countries at several levels. Here again, however, only a beginning has been made in achieving the necessary integration between these two major components of national health systems.

In spite of all the persistent diseases and social difficulties in the world, the life expectancies of populations have increased significantly over the last 30 years; this has been true in both developed and developing regions of the world. Life expectancies, however, are still much shorter in the developing regions, although the degree of improvement in those countries has actually been greater than in the developed regions. Regarding other indicators of health status, nutrition, and general wellbeing, the evidence on trends in countries is far from clear, but the disparities here too are intolerably great. Analysis indicates that much the largest determinant of health status (as reflected in life expectancy) is the general socioeconomic level of a country; nevertheless, greater health manpower resources may make an additional contribution to the improvement of health status.

How much of the changes can be attributed to the influence of WHO is very difficult to assess. In the opinion of informed observers throughout the world, health manpower policy progress in the developing countries has been partially but significantly attributable to the influence of WHO. This influence seems to have increased in recent years. The impact of

WHO in industrialized countries is less certain. In any event, there is a great deal of congruence between WHO's HMD policies and the corresponding policies advocated (if not fully implemented) in both developing and developed countries of the world.

The future - a view based on this analysis

At the head of this study we quoted the following sentence by the Director-General of WHO:

"To look forward with vision, it is wise to glance backward with perception - not to be bound by history, nor to blame ourselves or our predecessors, but to learn lessons as a springboard to the future"

Then, in the introduction to this analysis it was said that "as the study is definitely future-oriented, its final aim is to draw conclusions as a guide for future development". It is therefore legitimate to ask here: what are the lessons to be learnt from this analysis; what are the suggestions that could be made ?

Looking into the future, it may first be stated that the positive elements of development seem to auger well for a more rapid progress. It has been established that there is now a very clear, systematic awareness of both quantitative and qualitative problems; that there is a clearly stated policy based on the coherent concept of HSMD discussed and endorsed by representatives of all Member States (resolution WHA29.72) and firmly related to health for all by the year 2000 through primary health care; that there is a well elaborated strategy with some new methods, closely linked to the strategy for health for all by the year 2000; that there is a growing unity of all organs of WHO on the basis of a common understanding of the common goals; that there are more and more Member States that display different degrees of political will to act decisively for health for all by the year 2000 through primary health care which, in the field in question, means an integrated development of health services and health manpower (HSMD); and that resistance to the new policies and strategies, though still very powerful, shows some signs of diminishing. Taken together, these facts indicate that conditions are now favourable for a more rapid development in the right direction. A clearly growing political pressure is now being exerted by the world community of nations on Member States to do what they can on their own, and to cooperate with others, to achieve health for all by the year 2000 through primary health care.

The first conclusion for the future therefore seems to be: in the past few years, in the second half of the 1970s, a new HMD policy and programme both for Member States and - in order to cooperate with them - for the Organization has been elaborated and its implementation has even started. It is therefore evident that the analysis suggests the continuation of (a) further adaptation to the ever-developing needs and demands, and (b) the consistent implementation of policy and programme both at national and at international level, as foreseen in resolution WHA29.72 and in the long-term HMD policy document endorsed by it (document A29/15)[1] and amended on the basis of the Alma-Ata report[2] and the strategy document.[3]

It also seems to be evident that a systematic approach should be maintained in the development of the HMD programme, both nationally and in the Organization. At national level the ways and means to ensure health for all by the year 2000 through primary health care are charted in the national strategies for health for all by the year 2000, elaborated in 1980, based on the adaptation of principles enunciated in the Alma-Ata Declaration and report. This means that the health manpower should be planned, produced and managed to man teams in well planned health services adapted to local conditions, needs, demands, and resources.

Internationally, on the basis of this analysis, the following clusters of activities might be recommended:

1. Technical cooperation on a partnership basis and aimed at clearly defined national targets promoting national self-reliance in socially highly relevant areas which have significant and direct impact on health services development and, through it, on health. Cooperation may have to be concentrated far more than now on:
   - promotion of national political decisions to elaborate and/or reorient, as needed, explicit health manpower policies in the spirit of the HSMD concept, to implement them consistently, to monitor implementation and rectify policies and/or implementation as shown to be necessary by the results of monitoring;

- promotion of establishment and/or strengthening of mechanisms,[4] at all levels, necessary to carry out all these activities and to make national policies and programmes as well as decisions taken at World Health Assemblies and their national consequences and adaptation widely known to all those concerned;
- promotion of technical cooperation among developing (and developed) countries (TCDC) also in the HMD field;
- promotion of the planning and especially the management (utilization) aspects of the HMD process (there is a rather general feeling that after decades of concentration on the production aspect, the time has come to focus cooperation also, and emphatically, on these aspects);
- promotion of innovations, to increase relevance, in all elements of the HMD process;
- promotion of key activities, whose success may facilitate and/or speed up the achievement of principal national objectives, such as promotion of:
    - elaboration and application of simple methods of health manpower planning,
    - development of community-based, multiprofessional education programmes which are oriented towards the job and towards problem-solving,
    - teacher-training,
    - production, evaluation, and dissemination of teaching/learning materials,
    - management training,
    - improving the efficiency, i.e., the proper management of health workers,
    - monitoring of utilization of health workers, and
    - continuing education,

  all these activities being undertaken with special regard to the development of primary health care; and finally
- promotion of action-oriented, progress-relevant HMD research.

2. In its coordinating capacity the Organization will have to play a more active role than it has done so far as the coordinator of international health work also in the HMD field. There are a very great number of agencies, both governmental and nongovernmental, which are active in this domain and coordination is badly needed if harmful effects are to be avoided and/or eliminated. The multisectoral approach, already practised in the past with organizations such as UNESCO and ILO, must be broadened.

3. A permanent monitoring and evaluation of all elements of the programme to note progress, efficiency, effectiveness and impact. It will be necessary to keep a constant check on the problem-list, with great problem-sensitivity, to notice the appearance of new problems, the change of character in old problems or, hopefully, the waning/disappearance of some. Policies should also be monitored, evaluated and changed in the light of changing problems. New strategies should be applied to the solution of new problems and/or old strategies modified appropriately. As new problems that may emerge in the future cannot be foreseen now, it is impossible to suggest what new strategies will be needed to deal with them. However, it is clear that there will be a need (a) to stimulate and promote innovation in all aspects of HMD, protecting it against unjust attacks but ensuring fair evaluation, and on the basis of this evaluation to initiate the necessary action as well as the propagation and adaptation of successful and useful experiences; (b) to use the network of innovative institutions, working for the same goals, on a wider scale; (c) to fight, and help others to fight, resistance to innovation and progress by educating, persuading, and informing governments and decision-makers, and by winning over professional groups, maintaining dialogue, discussing, convincing, disseminating information, and exposing the failure of outdated and outmoded concepts and approaches, as well as demonstrating the advantages and disadvantages of new concepts and strategies. In all this the WHO Secretariat would be working and thinking together with - and being a sounding board for - Member States and governmental and nongovernmental organizations.

Obviously, the role of the WHO Secretariat will change. It will have to play fully its stimulating, thought-provoking and coordinating role in constant interaction with nationals at all levels as promoter and catalyst, as an agent for change, clearly and unequivocally placing emphasis, at least in the foreseeable future, not only on technical matters but also on political stimulus and promotion, shifting the emphasis from the "how" to the "what for", while at the same time strengthening its technical role.

The analysis makes it possible to reply to the logical next question as well: what should the political stimulation and promotion aim at? While the technical content and

emphasis will be different in each Member State, the aim in all of them will be that HMD policies, programmes and actions are invariably directed to the relevance of the HMD process to present and hypothesized future community health needs.

The second conclusion, therefore, is that political decisions are needed so that

(a) the permanent national HSMD mechanism that is established and/or strengthened[6] defines clear and unequivocal health manpower policies based on the recognition that development of health manpower is only one component in the development of health services, into which it must be properly integrated, i.e., that health manpower has no meaning in isolation: it is uniquely an instrument for effecting health care;

(b) the permanent HSMD mechanism fosters the functional integration of the three main components of the health manpower development process (planning, "production", management) into a composite whole, which is then integrated with the development of health services, and these in their turn aim at covering the entire population of the country with, at least, essential health care;

(c) health services, relevant to the health needs and demands of the entire population, are staffed in sufficient numbers by health personnel whose skills have been developed in answer to health problems to be solved;

(d) health manpower plans are prepared in conformity with the health manpower policies (see above) and as an integral part of the managerial process for national health development, which strictly identify and define the categories and types of health personnel to be trained, as well as their numbers and ratios, with a reasonable and clearly stated distribution of functions, indicating the knowledge, skills and attitudes, area and level of competence needed to carry out the tasks to be performed by each of them, thus also defining the composition of the health teams,[5] striking the balance among health team members that is best adapted to local conditions;

(e) the "production" of health manpower conforms with the health manpower plans, i.e., new training institutions and programmes are established in order to, and the existing ones are geared to, "produce" the right types and categories of health personnel in sufficient numbers able and ready to meet the health needs and demands of the entire population. This means the development of educational programmes which are (i) integrated on a problem-solving basis, (ii) community oriented and community based,[11] (iii) multiprofessional (team-based) in character, (iv) job-oriented (v) based on the clear understanding that "you are excellent only if you are relevant", and therefore (vi) adapted to the development of sciences and to local needs and resources;

(f) the management of health personnel ensures that trained personnel are used to the best advantage by the health services, i.e., they are employed and administered properly for maximum effectiveness of health services using the smallest volume of skill or group of skills with the necessary related knowledge to perform a specified job;

(g) a constant monitoring (surveillance)[7] procedure is established which monitors the utilization of health personnel and ensures that the results are fed back into the planning and production process, which is then readjusted accordingly.

From this list, given by way of example, it is clear that a new emphasis should be developed so that, for instance, in addition to continuing, and even strengthening and accelerating the elaboration of new, simple methods of health manpower planning and collaboration with Member States in their efforts to establish health manpower planning as a permanent process, emphasis would also be put on stimulating the right political decision to introduce and/or strengthen health manpower planning as described above in item (d), as an integral part of the national HSMD system and of the overall national health planning process. In the same way, it will no longer be enough, for example, to promote the development and utilization of the "best" methods of the teaching/learning process. Emphasis will have to be put here not only on "how" but also and in first place on "what for", i.e., what the training programme is carried out for, what it is aiming at. Is it aiming at training, for example very highly qualified academicians equivalent with those of country X or technically and socially well prepared, reliable professionals able and ready to serve their people and meet their health needs and demands ? It is clear that while the "how" is a purely technical question, the "what for" is acutely political.

After all, if there is one great lesson to be learnt from this analysis, it is that the key to further progress in the HMD field, in terms of the goal of health for all by the year 2000 through primary health care, is the promotion of national political will to seek out and apply the right solutions to well-diagnosed priority problems. There seems to be a health challenge here to which a right, and unequivocal, political response is needed. WHO is uniquely well placed to stimulate, as agent for change, this right type of political response without which even the best technical solutions may lead to a deadlock, as the lessons of this analysis abundantly teach us. It seems therefore that priority should now be given, at least for a while, to the stimulation of national political will and the appropriate technical approaches and solutions should all be subordinated to the clearly set main targets supported by that firm national will. However, it has to be added for clarification that WHO being par excellence a technical organization, the political stimulation should always aim at the utilization (a) of the best solutions, i.e., those most appropriate technically, and (b) application of those solutions to the right purposes relevant to local conditions. While in the past the Organization's attention was focused on (a), in the future both (a) and (b) should be properly and emphatically addressed.

In brief, the two main conclusions to be drawn from this analysis for the future are that (a) the long-term programme as foreseen by resolution WHA29.72 and document A29/15, and adjusted in the light of the Global Strategy for Health for All,[3] is responding to the real problems identified by Member States and therefore will have to be constantly adapted to the ever-changing needs and demands; and (b) the emphasis will have to be two-pronged: in addition to the technical aspects (the "how"), attention will have to be focused on the political aspects ("what for"). The keyword in the future should be relevance. A systematic, integrated and holistic programme approach will have to be applied with relevance as the main aspect of all activities - relevance to the main social target of health for all by the year 2000, and in fact, to the health needs and demands of the people. In view of this, the three main output indicators of the HMD process for the future might be: (a) extension of health coverage with special regard to primary health care; (b) improvement of quality of health coverage; and (c) community participation and satisfaction.[8]

The ET and HMD programme of WHO has tried to serve the interests of Member States in the best way it could since the inception of the Organization. After three decades of existence, demonstrating the tremendous potential and dynamism of the Organization, it is now in the process of renovation and rejuvenation, of a complete renaissance. It has set out to stimulate the national political will to plan, produce and manage appropriately trained health personnel to man teams for well-thought-out health services meant to cover entire populations and to meet their real health needs and demands, as well as to stimulate TCDC, to coordinate international health work in this field, and to provide technical cooperation as needed, in this whole process. That is how this programme can best contribute to the fight for the achievement of the main social target of health for all by the year 2000.

References and notes

1 World Health Organization. Health manpower development. Geneva, 1976 (Unpublished document A29/15).

2 Alma Ata 1978. Primary health care. Geneva, World Health Organization, 1978, ("Health for All" Series, No. 1).

3 Global strategy for health for all by the year 2000. Geneva, World Health Organization, 1981 ("Health for All" Series, No. 3).

4 These mechanisms will evidently take different forms in different countries but will in each case provide the framework for close collaboration of all sectors and institutions concerned with HSMD. In many cases, if not everywhere, this framework could be provided by the national health development councils and networks foreseen by the Strategy for Health for All by the Year 2000.

5 A "health team" is defined here as a group of persons who share a common health goal and common objectives, determined by community needs, towards the achievement of which each member of the team contributes, in a coordinated manner, in accordance with his or her competence and skills, and respecting the functions of others. The manner and degree of such cooperation will, of course, vary and has to be solved by each society according to its own needs and resources. There can be no universally acceptable composition of the health team.

6 Community-oriented education is defined here as one focused on both population groups and individual persons, which takes into account the health needs and demands of the community concerned. Community-based education, on the other hand, is defined here as one that involves the use of the community throughout the entire educational experience as an important environment in which learning takes place.

7 This means checking (i) whether the health worker is being properly utilized at the tasks he was trained for; (ii) whether he is ready and able to cope with these tasks; (iii) in what fields his competence needs updating; (iv) his job satisfaction; (v) his contribution to consumer satisfaction; and (vi) his life and working conditions.

8 The improvement of health status, and in general of the quality of life, is influenced by too many factors for it to be utilized as a direct indicator for HSMD activities, but of course it should always be taken into account as a final aim of all health activities.

WHO publications may be obtained, direct or through booksellers, from:

ALGERIA: Société Nationale d'Edition et de Diffusion, 3 bd Zirout Youcef, ALGIERS

ARGENTINA: Carlos Hirsch SRL, Florida 165, Galerias Güemes, Escritorio 453/465, BUENOS AIRES

AUSTRALIA: *Mail Order Sales:* Australian Government Publishing Service, P.O. Box 84, CANBERRA A.C.T. 2600; *or over the counter from* Australian Government Publishing Service Bookshops *at:* 70 Alinga Street, CANBERRA CITY A.C.T. 2600; 294 Adelaide Street, BRISBANE, Queensland 4000; 347 Swanston Street, MELBOURNE, VIC 3000; 309 Pitt Street, SYDNEY, N.S.W. 2000; Mt Newman House, 200 St. George's Terrace, PERTH, WA 6000; Industry House, 12 Pirie Street, ADELAIDE, SA 5000; 156–162 Macquarie Street, HOBART, TAS 7000 — Hunter Publications, 58A Gipps Street, COLLINGWOOD, VIC 3066 — R. Hill & Son Ltd, 608 St. Kilda Road, MELBOURNE, VIC 3004; Lawson House, 10–12 Clark Street, CROW'S NEST, NSW 2065

AUSTRIA: Gerold & Co., Graben 31, 1011 VIENNA I

BANGLADESH: The WHO Programme Coordinator, G.P.O. Box 250, DACCA 5 — The Association of Voluntary Agencies, P.O. Box 5045, DACCA 5

BELGIUM: Office international de Librairie, 30 avenue Marnix, 1050 BRUSSELS — *Subscriptions to World Health only:* Jean de Lannoy, 202 avenue du Roi, 1060 BRUSSELS

BRAZIL: Biblioteca Regional de Medicina OMS/OPS, Unidade de Venda de Publicações, Caixa Postal 20.381, Vila Clementino, 04023 SÃO PAULO, S.P.

BURMA: *see* India, WHO Regional Office

CANADA: *Single and bulk copies of individual publications (not subscriptions):* Canadian Public Health Association, 1335 Carling Avenue, Suite 210, OTTAWA, Ont. K1Z 8N8. *Subscriptions: Subscription orders, accompanied by cheque made out to the* Royal Bank of Canada, OTTAWA, Account World Health Organization, *should be sent to the* World Health Organization, P.O. Box 1800, Postal Station B, OTTAWA, Ont. K1P 5R5. *Correspondence concerning subscriptions should be addressed to the* World Health Organization, Distribution and Sales, 1211 GENEVA 27, Switzerland

CHINA: China National Publications Import Corporation, P.O. Box 88, BEIJING (PEKING)

COLOMBIA: Distrilibros Ltd, Pio Alfonso Garcia, Carrera 4a, Nos 36–119, CARTAGENA

CYPRUS: Publishers' Distributors Cyprus, 30 Democratias Ave Ayios Dhometious, P.O. Box 4165, NICOSIA

CZECHOSLOVAKIA: Artia, Ve Smeckach 30, 11127 PRAGUE 1

DENMARK: Munksgaard Export and Subscription Service, Nørre Søgade 35, 1370 COPENHAGEN K

ECUADOR: Libreria Cientifica S.A., P.O. Box 362, Luque 223, GUAYAQUIL

EGYPT: Osiris Office for Books and Reviews, 50 Kasr El Nil Street, CAIRO

EL SALVADOR: Libreria Estudiantil, Edificio Comercial B No 3, Avenida Libertad, SAN SALVADOR

FIJI: The WHO Programme Coordinator, P.O. Box 113, SUVA

FINLAND: Akateeminen Kirjakauppa, Keskuskatu 2, 00101 HELSINKI 10

FRANCE: Librairie Arnette, 2 rue Casimir-Delavigne, 75006 PARIS

GERMAN DEMOCRATIC REPUBLIC: Buchhaus Leipzig, Postfach 140, 701 LEIPZIG

GERMANY, FEDERAL REPUBLIC OF: Govi-Verlag GmbH, Ginnheimerstrasse 20, Postfach 5360, 6236 ESCHBORN — W. E. Saarbach, Postfach 101610, Follerstrasse 2, 5000 KÖLN 1 — Alex. Horn, Spiegelgasse 9, Postfach 3340, 6200 WIESBADEN

GHANA: Fides Enterprises, P.O. Box 1628, ACCRA

GREECE: G. C. Eleftheroudakis S.A., Librairie internationale, rue Nikis 4, ATHENS (T. 126)

HAITI: Max Bouchereau, Librairie "A la Caravelle", Boîte postale 111-B, PORT-AU-PRINCE

HONG KONG: Hong Kong Government Information Services, Beaconsfield House, 6th Floor, Queen's Road, Central, VICTORIA

HUNGARY: Kultura, P.O.B. 149, BUDAPEST 62 — Akadémiai Könyvesbolt, Váci utca 22, BUDAPEST V

ICELAND: Snaebjørn Jonsson & Co., P.O. Box 1131, Hafnarstraeti 9, REYKJAVIK

INDIA: WHO Regional Office for South-East Asia, World Health House, Indraprastha Estate, Ring Road, NEW DELHI 110002 — Oxford Book & Stationery Co., Scindia House, NEW DELHI 110001; 17 Park Street, CALCUTTA 700016 (*Sub-agent*)

INDONESIA: M/s Kalman Book Service Ltd, Kwitang Raya No. 11, P.O. Box 3105/Jkt., JAKARTA

IRAN: Iranian Amalgamated Distribution Agency, 151 Khiaban Soraya, TEHERAN

IRAQ: Ministry of Information, National House for Publishing, Distributing and Advertising, BAGHDAD

IRELAND: The Stationery Office, DUBLIN 4

ISRAEL: Heiliger & Co., 3 Nathan Strauss Street, JERUSALEM

ITALY: Edizioni Minerva Medica, Corso Bramante 83–85, 10126 TURIN; Via Lamarmora 3, 20100 MILAN

JAPAN: Maruzen Co. Ltd, P.O. Box 5050, TOKYO International, 100–31

KOREA, REPUBLIC OF: The WHO Programme Coordinator, Central P.O. Box 540, SEOUL

KUWAIT: The Kuwait Bookshops Co. Ltd, Thunayan Al-Ghanem Bldg, P.O. Box 2942, KUWAIT

LAO PEOPLE'S DEMOCRATIC REPUBLIC: The WHO Programme Coordinator, P.O. Box 343, VIENTIANE

LEBANON: The Levant Distributors Co. S.A.R.L., Box 1181, Makdassi Street, Hanna Bldg, BEIRUT

LUXEMBOURG: Librairie du Centre, 49 bd Royal, LUXEMBOURG

MALAWI: Malawi Book Service, P.O. Box 30044, Chichiri, BLANTYRE 3

MALAYSIA: The WHO Programme Coordinator, Room 1004, Fitzpatrick Building, Jalan Raja Chulan, KUALA LUMPUR 05–02 — Jubilee (Book) Store Ltd, 97 Jalan Tuanku Abdul Rahman, P.O. Box 629, KUALA LUMPUR 01–08 — Parry's Book Center, K. L. Hilton Hotel, Jln. Treacher, P.O. Box 960, KUALA LUMPUR

MEXICO: La Prensa Médica Mexicana, Ediciones Científicas, Paseo de las Facultades 26, Apt. Postal 20–413, MEXICO CITY 20, D.F.

MONGOLIA: *see* India, WHO Regional Office

MOROCCO: Editions La Porte, 281 avenue Mohammed V, RABAT

MOZAMBIQUE: INLD, Caixa Postal 4030, MAPUTO

NEPAL: *see* India, WHO Regional Office

NETHERLANDS: Medical Books Europe BV, Noorderwal 38, 7241 BL LOCHEM

NEW ZEALAND: Government Printing Office, Publications Section, Mulgrave Street, Private Bag, WELLINGTON 1; Walter Street, WELLINGTON; World Trade Building, Cubacade, Cuba Street, WELLINGTON. *Government Bookshops at:* Hannaford Burton Building, Rutland Street, Private Bag, AUCKLAND; 159 Hereford Street, Private Bag, CHRISTCHURCH; Alexandra Street, P.O. Box 857, HAMILTON; T & G Building, Princes Street, P.O. Box 1104, DUNEDIN — R. Hill & Son, Ltd, Ideal House, Cnr Gillies Avenue & Eden St., Newmarket, AUCKLAND 1

NIGERIA: University Bookshop Nigeria Ltd, University of Ibadan, IBADAN

NORWAY: J. G. Tanum A/S, P.O. Box 1177 Sentrum, OSLO 1

PAKISTAN: Mirza Book Agency, 65 Shahrah-E-Quaid-E-Azam, P.O. Box 729, LAHORE 3

PAPUA NEW GUINEA: The WHO Programme Coordinator, P.O. Box 5896, BOROKO

PHILIPPINES: World Health Organization, Regional Office for the Western Pacific, P.O. Box 2932, MANILA — The Modern Book Company Inc., P.O. Box 632, 922 Rizal Avenue, MANILA 2800

POLAND: Składnica Księgarska, ul Mazowiecka 9, 00052 WARSAW *(except periodicals)* — BKWZ Ruch, ul Wronia 23, 00840 WARSAW *(periodicals only)*

PORTUGAL: Livraria Rodrigues, 186 Rua do Ouro, LISBON 2

SIERRA LEONE: Njala University College Bookshop (University of Sierra Leone), Private Mail Bag, FREETOWN

SINGAPORE: The WHO Programme Coordinator, 144 Moulmein Road, G.P.O. Box 3457, SINGAPORE 1 — Select Books (Pte) Ltd, 215 Tanglin Shopping Centre, 2/F, 19 Tanglin Road, SINGAPORE 10

SOUTH AFRICA: Van Schaik's Bookstore (Pty) Ltd, P.O. Box 724, 268 Church Street, PRETORIA 0001

SPAIN: Comercial Atheneum S.A., Consejo de Ciento 130–136, BARCELONA 15; General Moscardó 29, MADRID 20 — Libreria Diaz de Santos, Lagasca 95 y Maldonado 6, MADRID 6; Balmes 417 y 419, BARCELONA 22

SRI LANKA: *see* India, WHO Regional Office

SWEDEN: Aktiebolaget C. E. Fritzes Kungl. Hovbokhandel, Regeringsgatan 12, 10327 STOCKHOLM

SWITZERLAND: Medizinischer Verlag Hans Huber, Länggass Strasse 76, 3012 BERN 9

SYRIAN ARAB REPUBLIC: M. Farras Kekhia, P.O. Box No. 5221, ALEPPO

THAILAND: *see* India, WHO Regional Office

TUNISIA: Société Tunisienne de Diffusion, 5 avenue de Carthage, TUNIS

TURKEY: Haset Kitapevi, 469 Istiklal Caddesi, Beyoglu, ISTANBUL

UNITED KINGDOM: H.M. Stationery Office: 49 High Holborn, LONDON WC1V 6HB; 13a Castle Street, EDINBURGH EH2 3AR; 41 The Hayes, CARDIFF CF1 1JW; 80 Chichester Street, BELFAST BT1 4JY; Brazennose Street, MANCHESTER M60 8AS; 258 Broad Street, BIRMINGHAM B1 2HE; Southey House, Wine Street, BRISTOL BS1 2BQ. *All mail orders should be sent to* P.O. Box 569, LONDON SE1 9NH

UNITED STATES OF AMERICA: *Single and bulk copies of individual publications (not subscriptions):* WHO Publications Centre USA, 49 Sheridan Avenue, ALBANY, N.Y. 12210. *Subscriptions: Subscription orders, accompanied by check made out to the* Chemical Bank, New York, Account World Health Organization, *should be sent to the* World Health Organization, P.O. Box 5284, Church Street Station, NEW YORK, N.Y. 10249. *Correspondence concerning subscriptions should be addressed to the* World Health Organization, Distribution and Sales, 1211 GENEVA 27, Switzerland. *Publications are also available from the* United Nations Bookshop, NEW YORK, N.Y. 10017 *(retail only)*

USSR: *For readers in the USSR requiring Russian editions:* Komsomolskij prospekt 18, Medicinskaja Kniga, MOSCOW — *For readers outside the USSR requiring Russian editions:* Kuzneckij most 18, Meždunarodnaja Kniga, MOSCOW G-200

VENEZUELA: Editorial Interamericana de Venezuela C.A., Apartado 50.785, CARACAS 105 — Libreria del Este, Apartado 60.337, CARACAS 106 — Libreria Médica Paris, Apartado 60.681, CARACAS 106

YUGOSLAVIA: Jugoslovenska Knjiga, Terazije 27/II, 11000 BELGRADE

ZAIRE: Librairie universitaire, avenue de la Paix N° 167, B.P. 1682, KINSHASA 1

Special terms for developing countries are obtainable on application to the WHO Programme Coordinators or WHO Regional Offices listed above or to the World Health Organization, Distribution and Sales Service, 1211 Geneva 27, Switzerland. Orders from countries where sales agents have not yet been appointed may also be sent to the Geneva address, but must be paid for in pounds sterling, US dollars, or Swiss francs.

Price: Sw. fr. 15.—

Prices are subject to change without notice.

C/1/81